

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
- Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
- Includes supplementary materials /  
Comprend du matériel supplémentaire
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.

THE

# MONTREAL MEDICAL JOURNAL.

---

---

VOL. XX.

NOVEMBER, 1891.

No. 5.

---

---

## Original Communications.

### THE VALUE OF THE STUDY OF MEDICINE.

INTRODUCTORY LECTURE AT THE OPENING OF THE 59TH SESSION  
OF THE MEDICAL FACULTY OF MCGILL UNIVERSITY,  
DELIVERED OCTOBER 1ST, 1891.

BY R. M. BUCKE, M.D., OF LONDON, ONT.

*Mr. Dean and Gentlemen :*

The invitation which so much honors me to deliver this introductory lecture came to me as I was on the point of sailing for England. I had not strength of mind to refuse, nor had I, under the circumstances, any means whereby adequately to fulfil so important an engagement, for if I accepted I should have to write my lecture largely or altogether at sea, and the use of books would therefore necessarily be denied me. I decided, nevertheless, to attempt the task and to rely largely upon such inspiration as the ocean might give me, and accordingly much of what I now offer you was penciled on the steamer's deck in full view of the sparkling wave crests or of the long, slow, sullen roll of the unquiet Atlantic. It would be well, both for you and for me, had I been able while so occupied to catch from my great companion one pulse of her cosmic passion, one glimpse of her breadth, freedom, audacity, *insouciance*, one iota of her depth, her clearness or her beauty. You will judge, gentlemen, how little of all this has been granted me, but there remains my deep feeling of the privilege of speaking to and for and in the halls of dear old McGill, and on this feeling I rely to carry me without dishonor through the present undertaking. One-third of a century

ago, sitting for the first time on these benches, eager for knowledge and longing for distinction, my loftiest ambition would not have dared aspire so high as to the position I am this moment occupying, and my first duty to-day is the pleasant one of thanking this distinguished faculty for having singled me out from among far worthier men for this high, I might say this supreme, compliment.

I have said that I first sat on these benches a third of a century ago. That is a long time, but it is not long enough to dim in the slightest degree my memory of the men who then taught in these lecture rooms, nor to lessen my affection and reverence for them. They have gone to their reward, and my fellow-students are rapidly, year by year, following them. Have patience with me a moment while I, just for the pleasure the reminiscence gives me, speak of those old days and of those well-beloved teachers.

When I first came here to study, away back in the fifties, Dr. Holmes was Dean of the Faculty and Professor of Practice of Medicine. No simpler-hearted or more lovable man ever lectured in these halls. I attended a course of his lectures before he passed away—as he did while I was here—and have the notes of these lectures still. Scientific medicine has left far behind it since then his methods of diagnosis and rules of treatment, but I doubt much whether the best modern physician is more welcome at the bedside or does more good to his patients. The truth is that though we have since then created whole sciences, such as microscopy, bacteriology and gynæcology, doubled and trebled many others, such as psychiatry and pathology, learned to diagnose numerous diseases then unrecognized, invented instruments without number and introduced “new remedies” past computation, yet we have not, to adopt Tennyson’s language,

“ Gained a real height,  
Nor are we nearer to the light  
Because the scale is infinite.”

For centuries which are yet in the gravid womb of futurity, we shall advance and advance and advance as we have done in those old centuries which are dead, but we shall never get nearer absolute knowledge than we have been from the beginning and are now. All human history that has been and

is to be written is embraced by a certain poet in two short lines:

“Urge and urge and urge  
Always the procreant urge of the world.”

Dr. Campbell, professor of surgery, succeeded Dr. Holmes as Doan. The medical students of McGill have probably never looked up to any other man with quite the same reverence that they bestowed freely upon him. Noble in stature, face, manner and speech, he was a typical leader of men, and especially of young men. It did us more good simply to see him and to hear his voice than the whole teaching of a lesser man would have done. I was fortunate enough upon graduating to receive some prize books, which to-day are among my most precious possessions, because they are inscribed in the bold handwriting of grand old George Campbell.

I do not know how the students of to-day like their lectures on chemistry, but in my time, at all events to me, the lectures given by Dr. Sutherland were a source of constant pleasure. I can see his keen eye and handsome, kindly face, and hear his ready, eloquent words, uttered indifferently in French or English, as plainly now as I could in that far-back time while watching and listening to him, myself sitting all eyes and ears on a bench well toward the front of the room so that no detail might escape me. Dr. Sutherland was enthusiastically admired and most highly respected by the students who, in my time, were not as a rule especially guarded in their language, and what they thought was pretty apt to be said; it is all the more significant on that account that all the time I was at college, and all the time since, I have never heard a word spoken by one of them of either Dr. Campbell or Dr. Sutherland which, if known to them, would have displeased them. These three men, Drs. Holmes, Campbell and Sutherland, had our respect, our admiration and our gratitude, but the affection of the medical student of my day was given to Dr. Howard. Even now as I speak I see his tender, thoughtful eyes and hear his wise and gentle words. As a physician, as a friend, as a man, R. Palmer Howard lives to-day in my loving remembrance as among the wisest, truest, most kindly and best of all the men whom I have known.

Before I close this part of my discourse permit me to speak

for a moment of one other. There are men in this room who will know already to whom I am about to allude. He was not my teacher in the same sense as were those whose names I have mentioned, but in another way I learned from him as much as from any. He was my fellow-student, but I looked up to him as the pupil looks up to the master whose wisdom he recognizes. Joseph M. Drake, even as a student, was a learned man, and more, he was a wise man. He was the nearest of all men with whom I have been acquainted to Shakespeare's marvelous creation—the melancholy Dane—Hamlet. He was like that most lovable prince, learned, wise, critical, deeply religious, pre-eminently conscientious, and like him, too, he lacked determination, self-assertion and self-confidence; but no truer friend or man ever lived on this planet.

I would not like to have it thought—because I do not name them—that I was blind to, or that I am forgetful of the good qualities of my other teachers. I remember as the observations of yesterday the personal traits of Drs. Hall, Fraser, Wright and Scott. I recognize their learning and their excellent qualities. I remember how soundly I used to sleep—miserable wretch that I was—at the lectures of one of them, and how preternaturally wide awake I used to be at the weekly “grinds” of another.

Of my fellow-students, right good fellows and warm friends as many of them were, and as some of them still are, I will say little except that they are rapidly passing over to join the great majority. Many have long left us. Two have gone within the last few months, but some—good men and true—firm and lifelong friends to me, are still left. One thing I can say, and right proud I am to say it, that I have never known a graduate of McGill to become in any sense unworthy of his noble profession, or of his grand old *alma mater*.

But time will not allow that I pursue these personal matters further, were it otherwise I have said but a small part of what I would say. For as I speak the faces of dear friends—fellow-students and teachers—living and dead pass as in a vision before me. They are all sons of our dear mother. All sons of dear old McGill. And you young men coming to her now, I warn you that if you are worthy of her you, too, will

come to love her even as you have loved her who, until now, has been the dearest to you. That is the condition. Be worthy of her. Be worthy of her gifts, and she will bestow upon you riches unspeakable; be worthy of her regard and she will never forget you; be worthy of her affection and she will repay you with priceless immeasurable love.

Gentlemen, my purpose in appearing before you to-day was to speak to you for a short time upon a topic which, as it seems to me, is less often and less freely dwelt upon than its importance deserves; upon, namely:

#### THE VALUE OF THE STUDY OF MEDICINE.

At first sight nothing seems more obvious than the value of the study of medicine, but as a matter of fact there are few things less so; for what seems its greatest value is in reality its least, and its greatest value is either not seen at all, or when seen not recognized.

In the minds of most people the chief (if not the only) object of the study of medicine is the cure of disease, and no doubt it has some value in this direction, though wonderfully little as compared to what is generally believed. A few diseases can be cured, but by far the greater number cannot be cured by any means known to the world at present. Of those diseases which cannot be cured some lead inevitably to death, the rest, after running a longer or shorter course, spontaneously subside and the patient regains his health. It is chiefly from this last mentioned large class of diseases that the doctors derive their income and reputation. But it does not follow that in cases where the science of medicine cannot cure it is therefore valueless. In cases where the disease leads with sure steps, faster or slower; to death, there are few instances in which life cannot be prolonged and suffering lessened by a wise use of the means at the disposal of the trained physician. Neither does it follow that the science of medicine is useless in cases where, though the disease cannot be cured, its natural tendency is towards recovery, for in such cases the comfort of the patient can often be greatly promoted by judicious management. And a knowledge of the natural history of the disease will often enable the physician to give such advice and warning as may lead to the avoidance of seri-

ous mistakes which might, and probably otherwise would, be made by those in charge of the sick person, or by the sick person himself. The study of medicine, therefore is valuable, first for the cure of disease, second for the relief of suffering, third for the prolongation of life, and fourth for the management of such diseases as tend to get well of themselves.

All these are very well, and when any of us are sick we are glad to get an educated physician to tell us what to do and to help us get better, but they are, all put together, a small matter compared with the next factor in the value of the study of medicine which is to be mentioned, namely, the prevention of disease.

This is the field in which medicine has made its great practical conquests, and those that it has made in this field I firmly believe are trifling compared to those that await it in the near future. But consider for a moment what has been done already in this direction. Many of the most deadly diseases, such as the plague, cholera and smallpox, have been either entirely or almost entirely stamped out in civilized countries, and the avoidance of other diseases, such as typhoid fever, is surely, if somewhat slowly, following. By special means, such as vaccination, and by general sanitary measures, such as cleanliness, ventilation and drainage, not only these special diseases, but a large number of other ailments have been rendered less frequent and (when they do occur) less fatal. Again the sciences of anatomy and physiology are teaching us every day the folly, I might even say the sin, of certain highly injurious customs connected with dress, such especially as tight lacing; and I believe that common sense, in spite of fashion, is, as a result of scientific teaching, gradually permeating this department also; and perhaps our great grandchildren will enjoy the pleasure which is denied to us of seeing in our homes and about the streets the beautiful female form, as originally designed by the Creator, natural and graceful, undeformed by artificial appliances of any kind, the clothing so designed as to exhibit (not impiously attempting to improve) that supreme work of the Great Artist. When this day comes many diseases and weakness now common will be unknown. In the meantime, as a recent able writer has said, "while the dress of men is not in all respects what it should be, that of women is a disgrace to civilization."

In the matter of diet, and more especially in that of drink, the inhabitants of civilized countries, guided by medical science, have of late years made vast strides towards a more rational and more healthy life; thus it is now demonstrated that alcohol is always injurious when taken as an habitual article of consumption. This knowledge now gradually permeating the masses everywhere is unquestionably destined to lead at last to the total disuse of alcoholic stimulants. Already the change effected is marked, the quantity of alcohol consumed per thousand of the population in Western Europe and America being to-day much less than it was even twenty-five years ago, and diseases caused by its use have proportionately diminished.

Some idea of the value of general hygienic knowledge may be gathered from the single fact that whereas early in the eighteenth century three out of every four children born in London, England, died under the age of five years, at present only one out of every four dies during those years. Or to put it another way: one hundred and seventy-five years ago of all the children born in London only one-quarter lived to be five years old, at present of all the children born in that city three-quarters live to be five years old. It is probable that in this particular London would fairly represent the civilized world, so that it is safe to say that to-day the prospect of a new born child growing to manhood or womanhood is at least three times as good as it was a hundred and seventy-five years ago. And this enormous change is very largely due to the progress of medical science.

What has already been done in the way of prevention of disease, great as it is, is probably trifling compared with what will be done in the immediate future, since this branch of medicine is advancing with gigantic and ever quickening strides. As the exact nature and cause of the various diseases are discovered, means will be found, not dreamed of yet, to prevent their occurrence. Already medical science is beginning to point out how such common and terrible scourges as consumption and insanity should be attacked, and I have no doubt myself that in the course of another century the acute specific fevers, such as scarlet fever, measles, typhus, typhoid and the rest, will be stamped out in all civilized countries. In



fact it is impossible to overestimate the good that medical science has already done and may yet do for mankind in the ways mentioned; in the ways, namely, of relieving suffering, curing disease, and, above all, preventing disease. This being the case, I have no doubt I shall astonish many of you when I say that it is my deliberate opinion that the way in which medical science has been, and is to be, of most value to the race has not yet been touched upon by me to-day, and remains still to be mentioned; such, however, is my conviction. I believe that the general enlightenment which has come to the race through this great study has been of far more value to mankind than all the benefits I have recited. And I believe that it was well that man, being in all other respects constituted as he was, was created liable to accidents and diseases that he might be stimulated by these to the study of his own body and mind and of nature, in order that he might gain some knowledge of these diseases and the means by which they might be prevented, cured or relieved.

For man is naturally indolent, and unless he had been driven, as he was by the pain of disease and the fear of death, it is certain that he would have remained until to-day as ignorant of his own structure and nature as he was ten thousand years ago.

As I understand it, then, disease and death, and especially the fear of disease and death, have been and are good friends to man and not enemies as generally supposed; for by them man has been driven to investigate the laws which govern his own life, as well as those which preside over universal nature. The immediate purpose of his study has been and is to defeat disease, and in this purpose he has been, as we have seen, largely successful. But by and through this same study he has achieved something far more valuable than that which he sought. He has achieved, namely, or is in process of achieving, the liberation of the human mind. For what does the study of medicine after all mean? It means the study of man. But in order to understand man we must first understand his surroundings; that is, the world in which he lives. The study of medicine, therefore, means the study of man and of all his surroundings, that is, of all things with which he is in relation; in other words, the study of himself and all things

which do or may affect him prejudicially or beneficently. This study is, therefore, universal, and the following instances will show how it comes to be so. We want, for example, to understand the eye in order that we may treat its diseases and remedy its various defects, but the first thing we discover about it is that it is an optical instrument and that nothing can be thoroughly understood about it until the laws of optics are mastered, so we had to and did study light. So we want to understand the ear in order to treat its diseases, and in the same way we find that it is an acoustic instrument, and that nothing can be satisfactorily understood about it until the general laws of sound have been elucidated; we therefore study and finally master the science of acoustics. Botany is one of the tributary sciences to medicine and was created for its purposes in order that the vegetable kingdom might be forced to render up such substances as it possessed capable of being utilized in the treatment of disease. In order that man's true place in creation and his relation to the animal kingdom might be established, so that the structure and functions of the various parts of his body might be comprehended, the great science of comparative zoology was instituted and the development hypothesis, that vast and magnificent scientific structure built up within the present century by the labors of Lamarck, Isidore Geoffroy Saint Hilaire, Wallace, Darwin, Lyell, Huxley, Haeckel and Herbert Spencer, may be properly looked upon as a mere outgrowth of the science of medicine.

When we look at the subject more deeply and consider it more profoundly the above are seen to be comparatively trivial instances. We discover that man, standing as he does in nature and as part of nature, and also at the summit of and in a sense above nature, all the rest of nature is tributary to him, and leads up to him; that therefore the right understanding of man involves and supposes the right understanding of much that is not man.

It will be interesting and perhaps instructive to follow this proposition into some detail, and in order to do so I propose to show how a number of ascending lines starting from the various departments of lower nature converge toward, and at last meet in that miracle of elaborate organization, the human

body. These lines or series may be designated as first the Morphological Series, second the Histological Series, third the Chemical Series, fourth the Dynamical Series, and fifth the Psychological Series.

(1st.) The Morphological Series is the term used to designate the ascending sequence of forms which passes in an unbroken order from the lowest animals up to man. No member or organ in the human body can be fully understood until it has been traced throughout this series. For the various members and organs of the human body were not originally created as they exist in that body, but have each one of them a long history stretching far back into prehuman times, and we might as well expect to understand the present state of civilization in England without any knowledge of the early history of the races who now inhabit that country, as expect to realize the meaning and value of (for instance) the brain without any knowledge of its infra-human forms.

In saying this I do not necessarily imply that the human brain has been evolved from a lower form of brain, whether it was so or not it is equally necessary to study the lower and simpler forms in order to understand the higher and more complex form. The same thing is true of every organ in the body, to understand their structure and function as they exist in man, and to comprehend their genesis and evolution it is absolutely necessary to study them as they exist in the lower forms of life.

As in the case of the separate organs so in the case of the entire individual. The study of man which has been forced upon us by the dread of disease and death has gradually opened our eyes to the fact that there is an intimate relationship between ourselves and other animals who occupy a lower place in the scale of creation than we do. We have learned that every organ in man, down to the most minute, is tallied by a similar organ in any one of the higher animals that we may choose to select and examine. And that any organ which exists in any one of the higher animals will be found in man also if it be looked for. Even, strange to say, in cases where man has no use for the organ still he has it. For instance, man's external ear is motionless, he has therefore no use for the muscles with which the lower animals move their

ears, but for all that he has them. Again, all the apes use their feet, as well as their hands, to grasp with; they can all use the great toe as we use the thumb, that is, they can oppose it to the other toes and seize and hold sticks, nuts, or other things between the great toe and little toes, just as they or we can seize and hold small articles between the thumb and fingers. We have no such power, we cannot make use of our toes in this way, still every muscle which exists in the foot of the ape by means of which he executes the movements in question exists also in our feet; but we make no use of them, and can make no use of them. Did we ever make use of these muscles? If so, when? If we never used them why were they placed in our feet? Why should dozens of muscles be made and carefully placed and connected in our feet for no purpose? The muscles in question are now greatly atrophied for want of exercise. Were they created in this atrophied state, or were they created to be used, and have they since shrunk from want of exercise? Another instance: Cattle, horses, and many other of the lower animals have a broad flat muscle just under the skin of their neck and shoulders (a part of the body to which their tails will not reach), by means of which they shake the skin covering these parts and so drive away flies which have settled there. We also have that muscle in our body, it is called the *platysma myoides*, but we have no use for it, and could not use it if we wanted to do so, since from long inaction or some other cause its fibres have become in us incapable of contraction. Did we ever use that muscle? And, if so, when? If we never used it, why was it placed in our bodies. Once more: You all know that while we, in common with all land animals, breathe with lungs, the whole family of fishes breathe with gills. In our body there is a large artery called the *pulmonary*, which carries the blood from the heart to the lungs to be aerated. In fishes there is a corresponding artery called the *branchial*, which carries the blood from the heart to the gills for the same purpose. But the gills are much further from the heart and nearer to the head than are the lungs; it is therefore easy to distinguish by its position a rudimentary branchial from a rudimentary pulmonary artery, and rudimentary gills from rudimentary lungs. Now it is a fact that at a certain stage of the development of

an individual man, or of any other individual land animal, they have each and every one of them, both men and animals, rudimentary gills and rudimentary branchial arteries. These undeveloped organs are of course of no use to man or any other land animal; why then do they find a place in their bodies? Such anomalies as these might be mentioned by scores. I will refer briefly to just one more: You know that man has twelve pairs of ribs, that is twelve ribs on each side, but many other animals lower in the scale of creation have a much larger number. Many reptiles have twenty, thirty, even fifty or more pairs. But besides man's twelve ribs on each side he has running across the body below these in the situation in which other ribs would exist if we had them: a certain variable number of white lines (technically called *linie albæ*). Anatomists are agreed that these white lines correspond to the abdominal ribs of reptiles. But will anyone tell me, on the supposition of man having been a distinct and separate creation, for what purpose they were placed in his body?

I have said that the great value of the study of medicine is not the cure or even the prevention of disease, but the liberation of the human mind, and you may now catch a glimpse of one way in which it effects this liberation. The fear of disease and death forces man to seek means whereby these may be warded off; this search leads, along with much else, to the study of human anatomy; in studying anatomy we encounter the anomalies to which I have just referred and innumerable others like them; in order that light may be thrown upon these apparently meaningless freaks of nature, general or comparative anatomy must be and is studied; a knowledge of this leads to such results as I have set forth; from these and other analogous indications flow the vast and splendid speculations which light up with starlike beauty the pages of such writers as Darwin, Spencer and Haeckel, whose radiance carried forward and increased from age to age, shall yet illumine the darkest recesses of nature.

(2nd.) The second series is the Histological, a large subject upon which only a few words can now be said. You are, probably, many of you, aware that each one of our bodies is built up of millions and millions of cells; every organ, every tissue, every part of us is composed of these minute, generally

spherical, bodies, thousands of which would lie on the point of a penknife. These cells are not by any means all alike; every organ, each tissue has its own kind of cell of which it is constituted, so that in the human body there are not only many hundreds of millions of cells, but there are several hundred different kinds of cells. As we descend the series of organic forms from man, the highest to the very lowest, we find that the lower we go in the scale the fewer different kinds of cells the animal has until we come to the very lowest of all animal forms, and we find that of these each one is composed of a single cell. Here, then, is another marvellous series: First, animals consisting each of a single cell; then animals consisting each of a number of cells, but all the cells of the same kind; then animals consisting of two kinds of cells; then of a larger and larger number of cells and of kinds of cells, until we ascend to man, whose body contains a greater number of different kinds of cells than that of any other creature.

But now comes a curious fact: Man's body (as well as the body of every living creature, animal or vegetable,) begins its individual life as an animal of one cell. This cell is multiplied by growth and division, and after a certain amount of development has taken place instead of one there are many cells all of one kind; then some of the cells grow (as it were) apart from the rest, and we have many cells of two kinds; as the embryo develops we have both a larger and larger aggregate number of cells, and a larger and larger number of kinds of cells, until we have at last the immense number of cells and of kinds of cells found in the full grown man.

So here again we have two series corresponding with one another: the infinite series, namely, of the different animal forms from the unicellular to the most multicellular, and the series through which the individual man passes from his origin as a unicellular living form to his million-celled maturity.

(3rd.) The third series to which I wish to direct your attention is the chemical. One of the first things we learn when we begin the study of medicine is that life is almost entirely a chemical process; that the body consists entirely of chemical molecules; that these are constantly breaking down and as constantly being renewed; that every act of which we

are capable, every motion we make, every thought we think, every emotion we experience, has for its physical basis chemical change; has, in fact, as its basis the chemical degradation, that is the death, of that molecule or those molecules which act; so that all movements and processes which imply or indicate life are, in fact, acts of dying—expressions of death. We are, in fact, each one of us, from moment to moment, not metaphorically, but actually, constantly dying, and as constantly being reconstituted. This is the essential process which underlies all life; not that of man only, but the life of all animals and of all plants. This process is what might be called vital chemistry, but vital chemistry rests upon, absolutely depends upon, organic chemistry, and this again as absolutely rests upon and depends upon inorganic chemistry; so that these two last named had to be mastered before vital chemistry could be successfully studied. It seems probable that life in all its forms, from the lowest up to and including man, is essentially nothing but the action, reaction and interaction—the construction and destruction of chemical molecules—a certain complexity of the molecule being the supreme if not the sole condition of life, and its higher and higher complexity being the measure of the elevation of the life of the tissue and of the organism to which it belongs. For as we ascend from the lower to the higher forms of life the complexity of the chemical molecule increases *pro rata* with the degree of elevation of the life of the tissue to which it belongs until we reach the highest of all known tissues, the gray matter of the human brain, which is made up of chemical molecules so complex that down to the present time it has defied analysis. The study of medicine, entailing as it did the study of the chemistry of all parts of the human body, necessitated therefore and led to the study of organic and that to the study of inorganic chemistry, this last, perhaps, the most important and far-reaching of all the natural sciences which underlie life. This, then, is another way, and a most important one in which the study of medicine forced men to the general study of nature and led to the enlightenment and liberation of the human mind.

We thus see that the study of man's body, supposing it to be successfully prosecuted, necessitates not only a study of

the other living forms below him in the scale of vital existence, but the study of dead or inorganic nature as well.

(4th.) And if we pass now to the fourth or Dynamic series we shall see that this is just as true of the forces which animate our bodies as it is of the material of which these bodies are built up. Just as the matter of which our bodies are composed is related to all other matter—is built up of dead matter and returns to dead matter again—so is it equally true that every one of the varied forces which reside in our frame, and which we call vital forces, is merely borrowed for a moment from the great ocean of force in the outer world, and when used is returned to that again. And this is true not only of the force which drives the blood through our arteries and veins, of the force which we exert with our limbs, and the force with which we breathe; but it is true also of these far more ethereal and (so to speak) human forces called thought, desire, emotion, passion and will. So true is all this that it is now well recognized that before the forces that make up the life of a human being can be in any radical sense comprehended it is necessary to understand not only the vital forces generally (those of the vegetable as well as those which belong more especially to the animal kingdom), but those of inorganic nature also.

When these last have been mastered we find that they all, motion, heat, light, electricity, magnetism, chemical affinity, are continually passing into one another; that the same unit of force is at one moment one and the next moment another of these; that they each have a definite value in relation to all the rest; that, for instance, so much motion is equal to (will produce) so much heat; that so much chemical force is equal to (will produce) so much electricity; that so much light is equal to (will produce) so much magnetism; and so on of them all. Not only so, but as with matter so with force. As far as our experience goes none is ever created and none is ever lost, but the total quantity in the universe remains always exactly the same. And just as light, heat, magnetism, motion and the other forces of the inorganic world are continually passing from one of these forms to another, so also in a living body are these inorganic forces becoming from moment to moment vital forces; and the vital forces are as constantly



reassuming their original non-vital character. So that whether we consider the materials or the forces that enter into the composition of living beings these are, the one as well as the other, in a state of perpetual flux, never for one instant remaining stationary. The same substance which was yesterday food is to-day a part of my living body, and to-morrow will be part and parcel of what we call the dead world. And the force which one moment ago existed within my brain as chemical affinity is now a thought, and in another instant will be heat. But what I especially wish to draw your attention to is that all vital dynamics, of which I have just presented a momentary glimpse, is a constituent and necessary part of the study of the human body and therefore of the study of medicine; and that that study involved and necessitated the mastery of the laws of the forces of the outer world; so that this is still another way in which the study of medicine has led to the intellectual conquest of nature and the liberation of the mind of man.

(5th) In still another series of facts we see the same truth illustrated. Man has not only a body but a mind as well. *Ab initio* the study of the human mind was part of the study of medicine. Before the time of Hippocrates physicians studied psychology and classified mental diseases, and ever since the healthy and the diseased mind have been among the primary objects of medical science. To throw light on this great subject all nature has been ransacked, but above all the mental operations of animals from the lowest to the highest have been explored and considered. And with this result, that here again we find two parallel series, the one in man and the other in animals, leading from the same point to the same point and each pursuing on its way the same route. Low down in the scale of animated nature mind has its deepest taproot in protoplasmic movements, in non-nervous adjustments, in partly nervous adjustments, and in nervous adjustments—then what may be called mind itself begins in the rudiments of sense, the faculty to feel pain and pleasure. With this faculty, or immediately after it, comes memory; then the primary instincts, as surprise, fear, and association by contiguity. As we ascend the animal scale we find successively added to these associations by similarity, jealousy, anger, play,

reason, affection, recognition of individuals, communication of ideas, sympathy, recognition of images of things as in pictures, understanding of words, dreaming, emulation, pride, resentment, love, ornament, terror, understanding of mechanisms, grief, hate, cruelty, benevolence, use of tools, revenge, rage, indefinite morality, shame, remorse, deceitfulness, apprehension of the ludicrous.

But now take the individual man, study him from his origin and you will find the same functions unfolded in the same order. Why? Why should my mind as well as my body begin as infra-human and gradually become human? And if it must begin as infra-human, why does it in its evolution follow the exact path which is pursued by the growing mind of a dog, an elephant, or a baboon? And why does it also resume and summarize in its growth, before it surpasses, the animal mind from its beginning in the lower forms of animal life to its apex in the tribes of the anthropoides? Here, again, you see are two parallel series for a knowledge of which the world is indebted to the study of medicine. And the study of these series in its far-reaching results, its transcendent revelations has done perhaps more than any other toward the elevation and liberation of the human soul. For the results which I have hinted at are only the germ of what may be called modern psychology—the science of the evolution of the human mind.

This science, which, as I have said, is a distinct outgrowth of medicine, considers first the human mind in its infra-human origin; then in its evolution in the individual from infancy to maturity, and its parallel evolution from the *aialus homo* to modern man; it then unfolds and describes, as far as may be, the full-grown mind of to-day, and shows how each of its hundred faculties arose into being and attained its present degree of development; gives the chronology of each and its relation to the others; and finally it teaches us, arguing from our past and our present, what we may expect the human mind to become in the future when time and the powerful logic of events shall have from the pigmy intellect and narrow heart of the present brought into being the free and soaring intellect; the tender, affectionate, strong and compassionate heart; and the aspiring, all-comprehending and all-justifying soul of the

future. As I have said over and over again, and as I cannot say too often, the tendency of the study of medicine is to give us free thought and free thinkers—and this before all else is the prime condition of human advance. Therefore, as Browning says :

set free alike the soul in all,

\*       \*       \*       \*       \*

We may not be doomed  
To cope with seraphs, but at least the rest  
Shall cope with us. Make no more giants God,  
But elevate the race at once! We ask  
To put forth just our strength, our human strength,  
All starting fairly, all equipped alike,  
Gifted alike, all eagle-eyed, true-hearted—  
See if we cannot beat the angels yet!

Newton said: *Natura non facit saltum*. No more profound or far-reaching truth was ever embodied in so few words. The inorganic shades off into the organic; plants and animals run together indistinguishably; invertebrate animals pass by imperceptible degrees into vertebrate; reptiles into birds; the anthropoid forms into man; barrier after barrier is broken down; the last and strongest between the lower forms of life and man—the barrier of mind and language—is to-day tottering to its fall, and soon the human intellect will sweep freely over an entire world reduced by itself from rugged incoherence to harmonious law and order; and for this liberation of the soul of man he may thank before all else the science of medicine.

The study of medicine, then, means the study of chemistry, biology and psychology. That is, the study of all life, including mind and of the molecular relations, combinations and reactions which underlie life. If medicine has given us these vast sciences (and she certainly has), might I not well be content to stop here and rest my case, pointing to them and saying: Here, gentlemen, is the value of the study of medicine? But no, I cannot pause even here, for—I am forced to say it—the main value of the study of medicine remains still to be stated. That main value is not direct but indirect. Let me explain:

It was definitely shown early in the century by Auguste Comte, and later and still more exhaustively by Herbert Spencer, that chemistry underlies biology, that the latter

cannot be understood until the former is mastered : also that biology underlies psychology, and that, as before, the comprehension of the former of these is a necessary preliminary to the effective study of the latter ; by the same line of reasoning these great thinkers make it clear that a mastery of biology and psychology was an absolute prerequisite to anything like a scientific conception of sociology ; that is to say, we cannot understand the meaning of social facts nor of social relations until we have first made ourselves more or less familiar with the laws that govern the life of the individual.

It is not difficult to see in a rough way the truth of these propositions, for the mind being a function of a part of the body, and being influenced from moment to moment by the condition of the body, any one can understand that the body must be comprehended before the mind can be so. And mind being, as it is, an offshoot or prolongation of body, and depending on this for its very existence, it is easy to see there must be a close analogy between the laws of the two, and that that one of them which first came into existence must have had almost everything to do with establishing the laws for its own offspring. It is still more evident that a knowledge of mind must precede a right understanding of the laws that govern societies, since social movements of all sorts spring directly from the mental states, powers and aptitudes of the individuals who compose the societies.

As an example of the way biological and psychological knowledge influences social judgments, feelings and procedure, I may instance the change that is at present taking place in the views and feelings of mankind towards the degraded members of the social body, and in consequence the altered treatment these are receiving from their fellows. It is not long since lunatics were looked upon and treated almost as wild and dangerous animals, but a knowledge of psychology has totally changed our opinions and feelings in their regard, and has in the same degree altered our treatment of them. The same process is now at work upon our mental attitude towards criminals, and I wish here to call your attention to the extraordinary interest of this subject which has been of late years deeply studied almost everywhere except (strangely enough) by the English and among the English-speaking peoples. In

France, what is called criminal anthropology has been exhaustively studied and written upon by Despine, Joly, Tarde, Lacassagne, Ferre and others; in Italy by Lombroso, Broca, Ferri, Garofalo and Marro; in Germany by Krafft-Ebing, Knecht, Krauss, Flesch and Benedict; in Spain by Salillas and Vera; in Holland by Van Hamel, in Belgium by Quetelet, and in Portugal by Lucas. Also, it is said to be studied with avidity in Spanish South America, in Russia, and in Poland. Among English-speaking peoples alone during the last fifteen years there is no scientific work on the subject to be recorded.

It is now understood by those who have studied the anatomy, physiology and psychology of the class called criminals that these, in place of being persons (as formerly supposed) who might, if they liked, be good citizens, but who have wilfully elected to lead vicious lives, are, in fact, imperfectly developed organisms who, being defective *ab initio* in some one or more of the elements of mind that go to make up an average man or woman, are driven to the life that they adopt by a fate as inexorable as destiny itself, that they are rarely, if ever, proper subjects for moral reprobation, but are simply imperfect human beings whose instincts and acts are to be, not punished, but educated and (in the meantime) guarded against by the rest of the race.

A criminal (speaking broadly and roughly) is simply a person who was born with a defective moral nature, just as an idiot or imbecile is a person who was born with a defective intellectual nature, just as a person who is colour blind is an individual who was born without colour sense. The philosophy of all these cases is the same, it is covered by the word *atavism*—that is, a lapse to a prior condition. There was a time (not so long ago, either) when our ancestors had little or no moral sense, comparatively little intelligence—no colour sense—no sense of musical harmony—no sense of fragrance. Individuals born to-day, lacking any one of these, are simply cases of *atavism*, they are individuals from whose constitution certain previously acquired qualities have been, by some accident, dropped, they are not monsters, nor are they something new created by a freak of nature. And when a man is born with little or no moral sense and so commits acts perfectly natural to him, but which, perhaps, intensely shock the feelings of

other persons who have the moral sense well developed, he is, properly speaking, no more a subject for moral reprobation than is the person who is born with a defective intellect, or the person who is born without the sense of colour, melody or fragrance. Such a person is no more a proper subject for punishment than is an average man, because *his* life was not as pure as that of the best man that ever lived; no more, indeed, than is the best man that ever lived because *his* life was not far better still than it had been.

Towards the class called criminals the mental attitude of the race is now markedly in process of change. This class has been receiving, as I have said, of late years an immense deal of attention, and there is no doubt that the old revengeful feelings towards the members of it must rapidly die out on account of the establishment of truer views as to the origin and status of these people. Within the last half century it has been clearly shown that criminals constitute a distinct class just as clearly differentiated from the rest of society as are lunatics, idiots, or deaf mutes: that what may be called the criminal constitution once acquired is inherited—transmitted from father to son, just as is lunacy, idiocy, phthisis, or asthma, or just as stature, features, figure, complexion, Mental traits or bodily constitution are transmitted; that a person born with the criminal constitution can no more lead what we call a good life by his own unaided endeavours than an idiot can lead the life of a mentally well equipped individual; that such a person is born with such a mental bias or defect that criminal courses are as natural (and so to speak as *right*) to him or her as are industrious and respectable habits to a person born under better auspices; and further, it has been made clear that although such a mental constitution is often inherited, yet that it may and often does originate in the midst of a family apparently free from any such taint.

A person born with the criminal constitution does not need to be damned either by God or man—he is damned already. He does not need to be punished—he is punished already. To such a being all the higher, purer, and better instincts of the race are denied; he is shut out from all enjoyments but the grossest and most sensual; while at the same time he has a more than ordinary capacity for fear, hate, envy, and all other

feelings which are in themselves sources of wretchedness to the person in whom they reside and to all who are brought into relationship with him. Such a being is more deserving of pity than is any other person whatever; his fate is more to be deplored than that of the lunatic, idiot, imbecile or slave. The feelings of horror and dread with which society has looked for centuries upon lunatics are sufficiently disgraceful to it, but they are not half so much to be deplored and deprecated as are the feelings of abhorrence, aversion and hatred with which it has looked down in lofty and virtuous scorn upon the wretched criminal. All this now is being gradually changed, and the time is coming when punishment of members of this class will be as much a thing of the past as is that of lunatics at the present time. As long as there are criminals doubtless society must protect itself from them; this it will not fail to find means of doing; but the day is surely coming (and is perhaps not far distant) when the gallows, the whip, and the jail will be as obsolete as are to-day the stake, the thumbscrew and the rack, or, as are in the case of the lunatic, the chains, the scourges, the dungeons, and the other multiplied horrors of old Bedlam.

All this alteration of view and sentiment; all the inestimable enlightenment, and all the improvement in moral feeling to which I refer, and a hundred times more of which there is not now time to speak, do we owe (not entirely, of course, but largely) to the study of medicine.

Auguste Comte early in the century showed that the whole body of human knowledge—that is, all science—could be arranged in what he called a hierarchy. At the bottom of all, as basis for all the rest, lies mathematics, composed of its three great divisions, the calculus, geometry, mechanics, that is the laws of number, of space and of movement. The laws of number are the most universal of all, since number is universal; next to the calculus comes the law of space, and on these rest the laws of motion; for we can have no motion without a certain number (one or more) of things to move, nor can we conceive of motion without space in which to move. Upon mathematics rest astronomy, upon astronomy physics, upon physics chemistry, then in turn as we ascend the scale come biology, psychology, sociology, and on the top, to crown the

whole, morality; the principle of the classification being that as we ascend from science to science each becomes less and less simple and general and more and more special and complex. Now a very little consideration will show that the science of astronomy could not have been founded until mathematics had made a certain progress, and that a constant expansion of mathematics was a necessity if astronomy was to advance. So of chemistry and biology. So of psychology and sociology, as I have already explained. See now the practical consequence of this great law. In the early days of exact science the Greeks and then the Arabians made considerable progress in mathematics and astronomy. Later Galileo, Bacon, Descartes, Torricelli, Pascal, Mariotte, Laplace, Newton and a host of other workers founded physics, and not until after that could the great modern science of chemistry be established, nor biology until after chemistry, and so on. Where now should we have been to-day without the study of medicine? As soon as the time was ripe, mathematics, astronomy and physics being founded, the great army of thinkers, in which it is our chief glory to be privates, spurred on by the suffering of the race, and led by such generals as Boerhaave, Cuvier, Bichat, Hunter, Lamarck, Harvey, Haller, attacked chemistry, biology and psychology with what glorious results we know. Having laid the foundations of these, it became for the first time possible to begin to reduce to law the phenomena presented by human beings living in a social state, and the great science of sociology was founded early in this century by the man who established the hierarchy of the sciences, Auguste Comte. What then has been and is the value of the study of medicine? Simply this, that it has, from the point of view of the intellect, made it possible to found and establish modern civilization.

But my time is nearly finished and I must make an end. I began by saying that pain, sickness and death are good friends to the human race and not enemies as often supposed, and I think I have maintained my thesis. I have shown that without them there would be no motive capable of driving men to an effective study of their own bodies. I have shown that to understand the human body, not only itself but the bodies of other animals had to be studied. That the growth



not only of individuals but of species, orders, and families as well, had to be reduced to law and comprehended. That a knowledge of histology, chemistry and dynamics as well as the basic sciences of the hierarchy were all absolute prerequisites to the successful study of human physiology, and that finally something like a complete intellectual mastery of the human body (in outline at least) was essential to the establishment of the study of psychology and to the comprehension of that vast group of sciences which are comprised under the broad general name of sociology. Medicine is therefore the key and the doorway to all the loftiest, most interesting and most important branches of human knowledge. The study of medicine has been above all other things the origin and source of human enlightenment. It has been one of the principal agents in the enfranchisement of human thought. It has more than perhaps any other agency tended to and assisted in the ennoblement of man.

Gentlemen, I have done my best under the circumstances to show you in faint outline upon how proud a field you are entering, how glorious a heritage has descended to you from the work of the great pioneers of our grand profession; but remember this, it is only yesterday that this vast meadow became ready for the scythe, and so far only a few swarths of the good grass has been cut. Take off your coats, then, and buckle to it. The labour is great, but not greater than the reward. Does it seem impossible to master so much and then advance beyond? Never think so. Resolve to achieve and you will achieve. Resolve to conquer and the victory is half won. At the least, work—work while it is yet day with you, join in the good fight, the war for the liberation of the human soul. The enemy is not far to seek, he is close at hand; his name is ignorance, prejudice, superstition; it is for you, come fortune or misfortune, sorrow or joy, honour or dishonour, to spend your days in hand to hand strife with him, and at the last, in the glowing words of a noble poem:

At least not rotting like a weed,  
But having sown some generous seed,  
Fruitful of further thought and deed.

To pass when life her light withdraws,  
Not void of righteous self applause  
Nor in a merely selfish cause.

In some good cause not in your own  
To perish, wept for, honoured, known,  
And like a warrior overthrown.

Whose eyes are dim with glorious tears,  
When soiled with noble dust he hears  
His country's war song fill his ears.

Then dying of a mortal stroke,  
What time the foeman's line is broke,  
And all the war is roll'd in smoke.

## THE ADDRESS IN SURGERY.\*

BY A. E. PRAEGER, M.D., OF NANAIMO.

*Mr. President and Gentlemen,*—The eminent surgeon who a few weeks ago delivered the address in surgery at the meeting of the British Medical Association, commenced with the following quotation from one of his favourite authors: "There are duties difficult of fulfilment pertaining to every position in life, and there are duties attached to public professional life from which no man can assume to himself the right to shrink, with whatever diffidence and incapacity they may be undertaken."

I have first to express my gratitude to the President of the Canadian Medical Association for having done me the great honour of inviting me to address you to-day, and then to plead the above quotation as my excuse for appearing before you (and thereby excluding one from among many who could have filled the time more to your profit and entertainment) with a task which, I must myself confess, has been imperfectly fulfilled.

I invite your attention to the consideration of certain injuries of the spine, especially fractures and fracture-dislocations.

A perusal of the leading text-books can hardly fail to produce the impression that the vertebral column has not received that attention from the writers which its importance would justify. It is true a great deal has been written on the subject of so-called "railway spine," an inappropriate term intended to include the various injuries to which the railway passenger's spine is liable, and which differ in no material particular from the injuries ordinarily met with. These railway injuries have a special interest

\* Read before the Canadian Medical Association, at Montreal, September, 1891.

only from the fact that they frequently give rise to litigation, and the views of the writers lose much of their value, because they are biassed either in favour of or against the railway companies.

Among the many and various injuries which come under notice in a large colliery practice, probably the most frequent, and those which cause the surgeon most anxiety, are injuries of the back. That these injuries are of common occurrence is readily accounted for by the fact that while the miner is at work this part of his body is more exposed to violence than any other owing to the position he is forced to assume.

Sprains or wrenches and contusions are of constant occurrence and present themselves in all degrees of severity, from the most trivial to the most severe. The most frequent cause of the former is the sudden attempt to lift too heavy a weight—as, for example, the effort to restore a derailed full box of coal to the track, or sudden and excessive bending due to the application of violence; the contusions are generally due to falls of coal or rock.

The more one sees of the severer forms of these injuries, the more one appreciates the difficulty of making an accurate diagnosis, without which, of course, a prognosis cannot be given. To the inhabitants of the part of the globe in which I am practising an immediate prognosis appears to be the matter of prime importance.

The surgeon who cannot foretell definitely the chances of and time required for recovery is likely to find himself, sooner or later, supplanted by a herbalist or spiritualist; these gentlemen have none of the hesitation common to practitioners of the regular school in expressing an opinion, and, strange to say, they are always right. If the patient dies, it is from the wrong treatment of the regular practitioner; if he recovers, it is due to the superior knowledge of the quack.

The prognosis is rendered difficult by the fact that the symptoms frequently do not immediately disclose the true severity of these cases. For example, one meets with cases in which, when first seen, there is loss of power in the legs, inability to micturate

or defæcate, and yet within a very short time recovery takes place, clearly showing that this pseudo-paralysis was only set up by the patient's dread of the pain caused by moving, or (according to Page) "the muscles and ligaments may have been so placed *hors de combat* as to lead to great difficulty in micturition and defæcation, and which indicates how largely the ease and perfection of these acts depend upon the functional integrity of the muscles which support the spine."

In another set of cases these symptoms are persistent, while in yet another class the grave symptoms may not appear until some time after the accident, and then the probability is they betoken and are due to bruises of the cord, effusion in the membranes, or to extravasation of blood, caused, probably, by rupture of the posterior common ligament, "for it must not be forgotten (says Page) that some of the ligamentous structures of the column are in close proximity to the spinal canal and the blood-vessels within it. Laceration of the posterior common ligament cannot occur without risk of injury to the spinal membranes, not immediately, perhaps, by implication of them in the same lesion, but by extension of inflammation from the injured part. . . . So also the ligamenta subflava are in direct relation with the meningo-rachidian veins, and severe laceration of the one may be associated with rupture of the other. Hemorrhage may thus arise within the spinal canal, not of itself perhaps sufficient to cause appreciable symptoms, but yet enough to be the starting point of inflammation about the membranes, and, it may be, of ultimate degeneration of the spinal cord. Herein lies the danger of any form of accident whereby the spinal column has been inordinately bent, that some of the structures, which are contiguous to internal parts, may have been hurt, and there are no special signs or symptoms at hand to show that such has been the case."

The necessity for absolute rest after any injury to the spine, no matter how trivial it may at first appear to be, cannot be sufficiently emphasized.

Every case should be dealt with as though it were serious until sufficient time has elapsed to prove the contrary.

Page, who writes principally in connection with "railway spine," advises that, after sufficient rest has been given, the later treatment must consist, as in the case of the larger joints, in movement rather than in fixation and enforced rigidity of the affected part.

Doubtless in many of these cases the surgeon's greatest difficulty is in forcing the patient to move, but I fancy that it makes no little difference to the time required for recovery when a lawsuit is pending against a wealthy railway company and the patient knows that the jury will probably, in assessing damages, take into consideration the duration of his illness.

Among a class of men who have to depend entirely on their own exertions for their living, and who have not the prospect of receiving compensation for their sufferings, I find my greatest difficulty has been in enforcing rest, and that there has been little or no need subsequently to insist on movement.

Fracture of the spinous processes unaccompanied by lesions of the cord is not a very serious matter, and presents no points of special interest, and has not given rise to discussion as to its mode of treatment, and therefore, in speaking of fractures and fracture-dislocations, I shall allude only to that class of cases in which the continuity of the whole vertebral column proper is severed, and in which there is evidence of injury to or interference with the functions of the cord.

The early teachers of surgery knew of the existence of these injuries and wrote on the questions of treatment by suspension and resection. Hippocrates records his opinion in the following manner: "Succession on a ladder has never straightened anybody as far as I know, but it is principally practised by those physicians who seek to astonish the mob—for to such persons these things appear wonderful, for example, if they see a man suspended or thrown down, or the like, and they always extol such practices and never give themselves any concern whatever may result from the experiment, whether bad or good. But the physicians who follow such practices, as far as I have known them, are all stupid."

*Æquieta* urged that the surgeon should, if possible, attempt

to extract the compressing bone by incision (having first warned the patient of his danger), or if not, should soothe the patient by antiphlogistic treatment.

Ambrose Paré recommended extension and rotation in dislocations of the cervical vertebræ, and extension with pressure in those of other regions. In cases of fracture, if the processes only were broken they were to be replaced; if entirely separated from the periosteum, they were to be extracted. If paralysis were present, an incision was to be made and the fragments extracted.

Heister taught, "in cases where the cord is ruptured death is almost sure to follow; but as it seems cruel to neglect the patient on account of certain death, it is preferable to attempt something, though vainly. The surgeon should therefore denude the injured part with his scalpel and remove the fragments that press upon the cord."

Many of the teachers of the art of surgery to-day, though they differ widely in their opinions on "railway spine," and on other injuries and diseases, are singularly unanimous in condemning the operation of resection, though they are more tolerant of the milder method of treatment by extension.

Now, gentlemen, I am well aware that I may appear to some of you guilty of heresy in venturing to criticise the writing of the eminent authorities I am about to quote, but I submit that the subject is altogether far too important to be allowed to rest on the rather off-hand opinions they have expressed in connection with the question of operative interference.

Holmes, in his work entitled "Surgery, its Principles and Practice," says: If the displacement cannot be remedied by extension and counter-extension, can it be surgical operation? The proposal to trephine the spine—*i.e.*, to attempt, in one way or another, to elevate the portions which have been depressed on to the spinal marrow—has been sustained by the supposed analogy of depressed fractures of the skull, and has received the support of many famous surgeons. It is not becoming, therefore, to speak of it with disrespect. But the assumed analogy is obviously a very deceptive one, and I can find no evidence that

the operation has ever been really in any degree successful ; while, if unsuccessful in its object, it must tend to hasten death, for it is undeniably a very severe proceeding, exhausting the patient by hemorrhage, when the rational indication of treatment is to spare his strength in every possible way. There is, in fact, little analogy between the indications which lead the surgeon to trephine the cranium and the conditions present in almost every case of fractured spine with displacement. In cases suited for the operation of trephining the skull, the brain is compressed at a single definite accessible part (of no great extent compared with the volume of the brain) by a small portion of depressed bone or by a foreign body ; but its own proper tissue is believed to be only very slightly or not at all injured. In fractures of the spine, on the other hand, the displacement is generally due to projection of a portion or the whole of the body of a vertebra into the spinal canal at a part utterly inaccessible, crushing and disorganizing the whole spinal cord to an extent which cannot be remedied by the removal of the cause which produced it. Very often the cord is entirely divided at the seat of fracture. No judicious surgeon would think of trephining a skull if he believed that the brain was hopelessly lacerated—far less if he thought that there was in all probability a large mass of bone sticking into it at the base of the skull.

Dr. Brown-Séguard tries to meet this argument by urging that though the lamina and spinous processes are the only parts which are accessible for removal, yet the removal of these from behind will liberate the cord from pressure of the displaced bone in front. Even if this were so, however, it would leave a rugged fragment irritating the cord, and the prospect of benefit would not justify the additional irritation produced by the operation.

It is quite true that there are cases in which the displacement of bone is less than that shown in the figure, and that the cord is not always hopelessly disorganized.

(The figure alluded to is a drawing of a case of fracture and dislocation of the seventh cervical. The intervertebral substances between the sixth and seventh cervical vertebræ was ruptured, and their laminæ separated from each other by rupture of the

ligamenta subflava—*i.e.*, the fracture was complicated with dislocation, as so frequently occurs. The cord in this case was entirely disintegrated from a point opposite the fifth cervical to the third dorsal vertebra). But it is also true that in such cases—*i.e.*, where the cord is not hopelessly disorganized—the patient has a good prospect of survival, and it seems that under such circumstances an operation is more likely to prove the starting point of inflammatory softening than to cure the patient.

. . . . . Exceptional cases may occur in which, from the nature of the accident and the appearance of the part, the surgeon may think that only a small amount of bone is implicated in the injury, and where he may determine to give the patient the poor prospect of relief which this operation holds out; but in general it will only hasten the end.”

Page, writing on the same subject, says: “Accurate diagnosis is, if possible, of supreme moment. That a grave injury has been inflicted on the cord can be told at once with only too much certainty, for on that point the immediate paraplegia leaves no doubt; but we have to discover how and where the lesion has been caused. The point where can be learned by application of our knowledge of nerve distribution and by deciding the line—often a hyperæsthetic line—where palsy begins; but the manner how, whether by instant crush from displaced bones, by the simple pressure of extravasated blood, by severe bend and therefore disorganization of the cord, or by simple concussion of the cord, is frequently a matter of the greatest uncertainty. We have to fall back upon a history of the accident, and upon a careful examination of the spine itself, to feel or see whether there be any projection or displacement obviously discoverable by physical signs. . . . The surgeon may remove pressure from the cord, and give the best chances of recovery. If the cord itself be undamaged, and the paraplegic symptoms be simply due to the pressure of displaced bone upon it, then—as the record of several cases has proved abundantly—the symptoms may at once subside, and recovery may in the end ensue, when time has been given for the repair of the spinal injury. And even when there is something worse than simple pressure, and the



cord is being lacerated by some sharp fragment of bone, the reduction of displacement may perchance release the cord and thereby lessen the risks of inflammation and add to the chances of life."

Now, it is evident from this that Page emphasizes the importance of early diagnosis, and, if possible, the freeing of the cord from pressure, yet when he comes to deal with the question of trephining the spine (and here I would venture to suggest that the term trephining is improper, and that the proceeding should be called resection or exsection), we find him saying "that the operation has made no progress in surgery, nor is it likely to do so. In cases of fracture dislocation the cord is usually damaged irreparably; and when permanent pressure is exerted on the marrow by displaced bone, exact diagnosis is often impossible, and the physical difficulties of removing or elevating the displaced vertebra . . . . would be almost insuperable. We should add gravely to the dangers of the case by laying open the spinal canal. Here, again, a too ready assumption of analogy between brain and spinal cord led in all probability to this operation, which a clearer understanding of the physical differences in the situation of the two organs would have shown to be little feasible, and less likely to be followed by good results. It is an operation not within the range of practical surgery."

Liddell quotes the first recorded case in which the operation was performed by Cline at St. Thomas' Hospital on June 16th, 1814. The patient, a man, had fallen from a second story window the day prior to his admission into the hospital and was paraplegic. The notes of the case state that the attempt to remove the eleventh vertebral arch with a circular saw proved ineffectual, that a chisel and mallet and trephine were then employed, by means of which the separation was effected. The operation was considerably embarrassed by the unfitness of the instruments, and occupied considerable time, but afforded no relief, and the patient died three days after. Liddell, commenting on this, sums up as follows: "Mr. Cline himself candidly stated that he thought the operation had hastened the death of his patient. The lesions for which he operated consisted of

fracture of the body of the eleventh (to which the fragment of the twelfth still adhered) forward and slightly downward, and extensive laceration of the spinal cord. He removed two spinous processes and the laminæ of the twelfth dorsal vertebra. The foregoing abstract shows the true character of this operation, the difficulties which attend its performance, and its positive harmfulness, as well as its inutility, more clearly and in fewer words than any disquisition on the subject could do. The operation of resection or trephining is unjustifiable because it does not offer a reasonable prospect of improving the patient's condition in any case, while on the other hand there is always reason to fear that it may increase the chances of a fatal termination."

I have quoted somewhat at length the opinions of recent writers, because it bears out, in my opinion, what I stated with reference to the spinal column having been neglected. These are the opinions of eminent men, but I propose to attempt to show that they are not well grounded.

Liddell's judgment against the operation may, I think, be disposed of in very few words. He bases his opinion mainly on Cline's case—a very ancient one—performed as far back as 1814, with instruments admitted to be unsuitable, when the physiology of the cord was less understood, and when surgery did not occupy as high a scientific position as it does to-day.

We are told that the proposal to elevate the portions of bone which compress the spinal marrow has been sustained by some supposed analogy of depressed fractures of the skull, and effort is made to show that the analogy is wanting. Granting, for the sake of argument, that that is so, does that of necessity prove that the operation is unjustifiable? I venture to say it proves nothing of the sort, and that there is no greater need to establish the analogy here than there is to prove it between stone in the bladder and a cyst of the broad ligament in order to justify the ordinary surgical measures adopted in those cases.

The fear of hemorrhage is held up as an obstacle. We are better equipped than we were in Cline's day, and hemorrhage should no longer be the bugbear of the surgeon; moreover, this fear is more imaginary than real. We are told that no judicious

surgeon would think of trephining the skull if he believed that the brain was hopelessly lacerated, or would remove a large mass of bone if he found it sticking into it at the base of the skull.

Of course this sort of argument is meant to be very effective, because the moment one dissents from it one lays oneself open to the charge of being injudicious. But I should like to ask how is the judicious surgeon to know for a positive fact that the brain is hopelessly lacerated (in ordinary cases) unless he does trephine (because, of course, judicious surgeons should not guess); and, again, whether he would be very injudicious if he did remove the piece of bone sticking into the brain at the base of the skull? The patient's chance would be nil if he left it, while if the surgeon removed it his patient could not be in a worse position, and he might possibly have one chance of recovery in ten thousand. Then as to the objection that if the operation is performed it will leave a rugged fragment irritating the cord, this is surely visionary; if it is true of the operation on the spine, why is it not the case in the skull, and why do not the same authorities proclaim against that also?

I might also ask, why do they compare the most hopeless and most extensive injuries of the cord with ordinary depressed fracture of the skull? Would it not be just as reasonable to say that amputation for injuries is unjustifiable because some cases of compound comminuted fracture are hopeless from the first?

The best answer to Page's assertion that the operation is beyond the range of practical surgery is, that several cases in which it has been performed have lately been reported.

If the reasons I have quoted are all that can be urged against it, I think that an exceedingly weak case has been made out, for they are misleading and not supported by actual facts.

Were we to accept unquestioned the opinions of the so-called authorities, no matter how eminent they are, surgery would never progress; and in this connection it is only necessary to remind you how bitterly they opposed ovariectomy, and left it for those who were at that time certainly not in the front rank to perfect its details; and even to this day there are those among them

who declaim against what they are pleased in a contemptuous manner to describe as the "mutilation" or "castration" of women.

It is not long since that Lawson Tait found it necessary to urge the claims of the peritoneum and to point out the anomaly of having one system of surgery for the remainder of the body and a different one for that portion of it in connection with which he has immortalised himself.

In the same way may we not claim this measure of justice for the vertebral column, and that, at all events, until a sufficient number of cases have been observed and recorded judgment shall be reserved, and that the efforts of surgeons to save the lives of those who are suffering from these terrible injuries shall not be branded as unjustifiable. The surgeon's first duty is to try at all hazards to save life, and in desperate cases, which in all probability will have a fatal termination, surely it is justifiable to make the attempt even if success should be only as one to a thousand.

The experiments of Brown-Séguard show that union can take place in wounds of the cord, and that its functions may be restored. The experiments of Masins and Van Lair show that it possesses great reparative power; they divided the cord in frogs, and at intervals of from two to four months it was found that sensibility and power of motion was restored.—(Liddell in Ashhurst's Surgery.)

Andrews says: "It is not to be inferred that complete recovery cannot take place after considerable violence has been done to the cord substance as well as the membranes, provided the source of irritation or compression has been completely removed. This *must be* true of slight lacerations, since it has been observed clinically in actual wounds of the cord substance."

Meryon describes a case in which the "spinal canal was penetrated by a knife between the tenth and eleventh dorsal vertebra and the cord partially divided, so that there was escape of spinal fluid and paralysis of parts of the body below. The patient recovered in two months. Many such cases of complete or partial recovery have been recorded which show that reparation is possible in the nerve structure under favourable conditions."

I do not wish it to be understood that I am urging the advisability of resection in every case of fracture or fracture-dislocation of the vertebræ: nothing is farther from my intention, for I believe there are cases in which the compression can be relieved by carefully applied extension. Out of a number of cases which have come under my care during the last few years (all with the exception of two being the result of direct violence), I have employed it with success in three, in all of which the fracture and displacement were easily recognizable, and in all of which complete paraplegia followed immediately on the injury. I do not propose to weary you with notes of all these cases, but will briefly mention a few facts in connection with one in which the injuries extended from the third to the seventh dorsal vertebræ. The patient, a Chinaman, while walking down a steep incline in the mine, was struck by some runaway loaded cars travelling at great speed. He was just making the attempt to get out of their way when they struck him, and jammed him against a prop. He was picked up and carried out of the mine, and when I saw him in his little shanty (five miles from any house), he was suffering from great shock and completely paralysed below the site of the injury. There was great displacement of 6th, 7th and 8th vertebræ. His abode was hardly such as one would have chosen for the treatment of a severe injury, his bed simply a few boards covered with a mat. At the end of two days, having meanwhile confined my attention to catheterizing him regularly, for I had looked on his case as hopeless, and a large bedsore had already appeared on the buttocks, I determined to try suspension. Having no costly apparatus, I had to suspend him from the rafter, and then made extension from his pelvis and applied a plaster-of-Paris jacket, which he wore five months. At the end of three weeks paralysis had quite disappeared, he made a good recovery, and is now following his ordinary occupation.

I do not commend the method of suspension adopted in this case, and believe a safer and just as effectual one to be by means of a hammock. If extension and counter-extension reduce the deformity and relieve the symptoms of pressure, absolute rest will probably be all that is required to complete the cure.

But if extension fails to relieve the displacement, or, having relieved it, the surgeon has reason to fear that the cord is still subjected to pressure, I do urge that in such case the ordinary surgical principles be applied to the cord and that it be freed with the least possible delay, and I do so for the following reasons:—

1. It is sound practice to relieve pressure wherever it occurs.

2. That the operation, properly performed, with suitable instruments and under aseptic precautions, is not of itself a source of great danger, and that the danger to the cord from pressure far outweighs that of the operation.

3. That under suitable conditions—*i.e.*, when the cord is relieved from pressure—a laceration even to complete severance may unite and its functions be re-established.

4. That the patient's chance, if left unaided, is very slim, and that if resection proves successful in saving but one in a hundred its justifiability is established.

5. That just as no obstetrician, in dealing with a shoulder presentation, waits for "spontaneous evolution," but completes delivery on rational principles, so the surgeon should not trust to luck or expect nature to do more than her fair share.

I have twice been called on to perform resection, and although I cannot tell you that either of the patients live to day, I shall not hesitate to urge the importance of the early freeing of the cord from pressure whenever another case presents itself.

The first was that of W. R., aged 32, working on a cage in the shaft of a mine. On July 6th, 1889, owing to a sudden jerk of the cage, he was thrown out violently while bent nearly double, and while in the act of falling was struck by the cage and pinned between it and the timbers of the shaft. There was a well-marked fracture with great displacement, extending from the tenth dorsal to the first lumbar vertebra. Paraplegia was instant and complete. Moderate extension was applied without effect. Operation was advised, but the patient would not consent. Although placed on a water-bed, bedsores rapidly appeared, and in spite of strict attention to the bladder a low form of cystitis was set up. On Sept. 19th (six weeks after the in-

jury), owing to his miserable condition, he consented to operation. The spinous processes and laminæ were removed and the cord exposed. It had been subjected to great pressure and presented a shrunken appearance. The operation wound and bedsores speedily healed, and the patient regained control over his sphincters. For a short time he appeared to regain some slight power of movement in his legs, but this was gradually again lost to him. He passed out of my hands about a year after the operation, and survived it altogether a little more than eighteen months. If it did him but little good, it certainly did no harm, and the result might have been different had the operation been performed before permanent change had taken place in the cord.

The next case was that of J. A., who, while mining on Dec. 6th, 1889, had about half a ton of coal fall on his neck. Paralysis was immediate. Respiration entirely diaphragmatic. Consent for operation was withheld until the third day (Dec. 9th). The spinous processes and laminæ of the fifth, sixth and seventh cervical and first dorsal were removed, as there was pressure on the cord. The membranes were opened and a large quantity of fluid liberated. After the operation the breathing was distinctly costal. The same evening the reflexes were re-established, and he could feel his feet and legs touched. On going to see him the next morning I learned that during the night he had regained so much power that he turned over in bed and died suddenly.

I could not get permission to hold a post-mortem, so I am reluctantly forced to the conclusion that his end was possibly due to a great want of foresight on my part in not applying some apparatus which would have rendered movement impossible. Had I done so I might have been in a position to report a case of recovery; as it is I can only say that the importance of immovable apparatus (which I had thought I fully understood and appreciated before) is indelibly fixed on my memory. The fact is, I was unprepared for such rapid amelioration, and I have little hesitation (except the feeling of sorrow at having to confess an error) in reporting this part of the case, because I feel that our failures are far better instructors than our successes.

## ADDRESS

READ BEFORE THE MEETING OF THE MONTREAL MEDICO-CHIRURGICAL SOCIETY, OCT. 23RD, 1891.

BY THE RETIRING PRESIDENT, DR. FRANCIS J. SHEPHERD.

*Gentlemen*,—I must first heartily thank you for the great consideration you have extended to me during my occupancy of the presidential chair of this Society. I know that I have often erred on the side of strictness in my rulings, and may at times have irritated some of you. This course of action I did not pursue from any personal motive, but in what I considered the best interests of the Society. I have also, during the year, endeavoured to be punctual in commencing work, and when it was commenced, to continue it to the end, without letting side issues obscure and obstruct it. Under the mild rule of my distinguished successor, Dr. Buller, you will regain your equanimity, and by his careful and skilful steering will be guided into quieter havens, and there feed on the scientific food so richly provided for you.

The year just expired has been an eventful one for this Society and for medical science at large,—an eventful one for this Society for several reasons. First, because it had been marked by the advent amongst us of a goodly number of our French brethren, who, with that spirit for which they are so famous, preferred joining an already established English-speaking Society, in which the proceedings were carried on in, to them, a foreign tongue, to establishing a society of their own. This step on their part is the proper one, and emphasizes the fact that in the republic of science, and medical science particularly, there is no distinction of nationality, language or creed. Such unions with our brethren will greatly tend to break down the barriers which it would be foolish to deny have been raised up between us, and make us proud to be called by the common name of Canadians. A second reason which makes this a memorable year is a most melancholy one. On no less than four occasions has it been our sad duty to pass resolutions recording our esteem and respect for members deceased. Two of these had been honoured with



the highest post it is in your power to bestow—the presidential chair—and all had done good and honest work for the Society, as the records will attest.

The first to leave us was *Edward Henry Trenholme*. For years he was an active member, reading numerous papers and entering into all the discussions. He graduated in 1862 from McGill University, and soon established himself in successful practice. He was a man of ability and great surgical daring, of no small amount of originality in the department of gynaecology, which he made his special study. He contested with Battey the priority of the operation of removal of the ovaries for the cure of the more chronic forms of diseases of these organs, and in many other ways made himself known to the profession abroad as a pioneer in certain departments of gynaecology. He had his faults, but all must concede that he was devoted to his profession and did what he could to further its advancement.

The next member for whom we had to mourn was a much younger man, but one whose performance was already considerable, and who gave high promise of the accomplishment of greater things in the future. All who knew *Richard Lea MacDonnell* as intimately as the speaker could not help loving him. Those in trouble could wish for no kinder friend, and the good deeds he did were not proclaimed from the housetops. He was the soul of honour, and could not, if he had tried, have done a dishonourable act. In the young men commencing practice he was especially interested, and was at all times their friend. The students who were so fortunate as to be under his charge could not help feeling his influence for good, for he inspired all with a high sense of their duties in the profession they had chosen. Dr. MacDonnell graduated in 1876, and after a year abroad became connected with the teaching staff of McGill University. He at the time of his death had earned a solid reputation as a careful, exact, and skilful teacher of clinical medicine. He read many papers of great value before this Society, and when present took part in the discussions, to which he always added much interest. He was the first to draw attention to the absence of the patellar reflex in diphtheria, and his paper on the symptoms of *Tracheal*

*Tugging in Aortic Aneurism*, since its publication in the London *Lancet* last winter, has attracted much attention. His paper on *Typhoid Fever*, read before this Society over a year ago, was a good sample of his honest, painstaking, and accurate work. At the time of his death he was engaged in writing an important section of a new work in the Practice of Medicine, edited by Prof. Pepper. If there were more Richard MacDonnells in the profession, both its tone and general status would be much higher than at present. A strong man has gone from amongst us whose memory will long survive, and whose influence will long be felt.

Soon after Dr. MacDonnell's death we had to assemble again for the purpose of offering our tribute to the memory of *Thomas Anderson Rodger*, who was cut down in the prime of his manhood when he apparently had many years of good work still before him. He graduated from McGill University in 1869, and was soon engaged in a large and lucrative practice. He was a man of action, and had many devoted friends, his geniality, bonhommie and heartiness involuntarily attracting many to him. As a practitioner he was most successful, being endowed with a huge amount of common sense and tact, which, united with good abilities, ensured his success. As surgeon-in-chief of the Grand Trunk Railway, he was known from one end of the country to the other, and was welcomed heartily wherever he went. He some years ago occupied the presidential chair, and at the time of his death held the honoured position of a member of the Medical Council of Quebec. No one will be more missed from among us, and no one will be more difficult to replace than Tom Rodger.

The last member whose death I have to notice is *Robert Godfrey*, who graduated in 1844 from McGill University. Dr. Godfrey belonged to a generation earlier than that known to most of you. He was one of the most honoured general practitioners in Montreal, and his kindly sympathetic manner, shrewd worldly wisdom and great experience made him a valued friend and counsellor. Dr. Godfrey for many years was connected with the Montreal General Hospital, and had acquired a considerable reputation in plastic surgery, for which he had peculiar

aptitudes. At the time of his death he had retired from practice with a well-earned competence, having more than accomplished the allotted three-score and ten years, to which it is the fortune of so few of us to attain. Dr. Godfrey also has filled the presidential chair, and has done good work in connection with this Society. He rests from his labours.

The past year has been an eventful one also on account of the large amount of excellent work brought before us in the shape of rare and interesting cases, numerous pathological specimens, and instructive papers. One striking feature of the year was the increase in the number of the younger members who contributed to the proceedings, and this notwithstanding the fact that some of them had formed a society distinct from this, in which, I am informed, good work is being done.

Our contributions to pathology have been especially prolific and valuable. No less than twenty-two members have brought before us one or more pathological specimens. Drs. Armstrong and Johnston head the list with no less than eight contributions each; next come Drs. Alloway, James Bell and the President with six each; Dr. Laphorn Smith with five; Dr. Roddiack with four, and Dr. MacDonnell with three. Specimens were also shown by Drs. James Stewart, Geo. Ross, H. D. Hamilton, Finley, Reddy, Hutchinson, McConnell, Gurd, Hingston, Reed, Springle, Molson, Wm. Gardner, and Tunstall of Kamloops, B.C. I shall not attempt to enumerate the various specimens contributed, but from the names mentioned it will be seen that they cover every department of medicine and surgery. Another feature has been the exhibition of patients the subjects of rare interesting diseases and operations. These were shown by Dr. Jas. Stewart, Dr. Molson, Dr. Jas. Bell, Dr. England, Dr. Gurd and the President. Papers and reports of cases were read by Drs. Richard MacDonnell, England, Allen, Kenneth Cameron, Jas. Bell, Springle, Johnston, Hutchinson, O'Connor, Alloway, Laphorn Smith, McKechnie, Geo. Brown, Ruttan, G. T. Ross, Wesley Mills, James Stewart, McConnell, Buller, Lockhart, Armstrong and Blackader. In fact, no less than thirty-two members of this Society have, during the past year, done some-

thing to forward its work and increase its usefulness. This certainly speaks well for the vitality of the Association. We have had many papers of more than usual interest and value ; among them I might mention Dr. Stewart's paper on *Epilepsy*, Dr. Ruttan's paper on a *New Method for Estimating Acetone in Urine*, Dr. Blackader's on *Infants Foods*, Dr. Johnston's on *Bacteriological Examination in Cases of Diphtheria*, Dr. G. T. Ross's on *The Study of Koch's Treatment of Tuberculosis in Berlin*, and other papers of interest were contributed by Drs. Armstrong, Lockhart, Buller, McConnell, Mills, Geo. Brown, James Bell, Laphorn Smith, and McKechnie.

The average attendance was large (28.2), and at some meetings over forty were present. This shows that the interest in the Society is increasing, and that the profession in general are becoming aware of the educational and other advantages derived from regular attendance at the meetings. The attendance of the younger members has of late been very large, and I hope that every year will see an increase in their numbers, and especially of those who contribute to the proceedings. All that is needed is to begin, for it is the first step that costs. Every man who sees cases and observes them must have something to tell, and he also must occasionally see some cases that puzzle him and on which more light needs to be thrown. What better method is there than bringing such before this Society, keeping in mind the old proverb that "in a multitude of counsellors there is wisdom."

The debates on papers read have often been very poor and barren, and it would be well if the Society could improve itself in this respect. If the members would read up the subject of the paper before coming to the meeting they might often get up interesting debates ; indeed many who would have much to say in private about the paper become shy and dumb in public. The only thing is to always endeavour to say something about the paper, if it is in your line of work, and say what you have to say shortly and clearly ; but you should know what you want to say before getting up, and should not improvise as you go along. You will say, however, that the object of the President's address

is not to give unasked for advice, so I shall stop before I have gone too far and proceed to discuss matters less personal.

The past year has been an eventful one to medical science in general, because it will always be associated with the name of Koch and his discovery of a remedy which he called tuberculin, and which he hoped would solve the problem of the cure of tuberculosis. The discovery of no other remedy ever raised such high hopes which were condemned to be so bitterly disappointed. The general public went mad on the subject, and they were aided by members of the profession. It is not a year since this potent remedy was made known, prematurely, it is said, and against the wish of its great discoverer. The world was soon startled with accounts of its marvellous properties, which read like a fairy tale. These accounts, however, were too good to be true. They were received with suspicion by the more cautious and thoughtful members of the profession, but the majority read and believed. Well, like other remedies, tuberculin has had its rise, decline and fall, the only difference being that it rose higher and had to fall further. The history of this remedy is familiar to you all, how the lay press was full of its marvellous performances, how those sick unto death were made well, and how it was confidently hoped that now one of the greatest scourges of the human race was laid low, that other discoveries would follow, and if perpetual youth could not be bestowed upon us, yet almost perpetual life would be our portion. The medical press, though not so extravagant in its promises, still felt the surrounding elation. The whole world became excited, and towards Berlin commenced a pilgrimage greater, perhaps, than ever took place to Mecca, and with much less satisfactory results. Many universities and societies sent ambassadors, or perhaps I should call them disciples, to learn wisdom at the feet of the great Bacteriologist. Others waited for more light; they were the wiser, for in nearly every case the pilgrimage gave no results and no good purpose was accomplished. This good city of Montreal was also stricken with the madness, though only to a slight degree, and although no members of our Society were sent as ambassadors, still two of our more enterprising confrères went out to see the

“reed shaken by the wind,” on their own responsibility. When they returned, they gave us graphic and interesting papers concerning what they had seen abroad. In the meantime some of the wonderful fluid had been procured here, and was made use of in the hospitals, but no such results as we had read of were ever seen, in fact the remedy did much more harm than good, and soon it ceased to be employed. The stage of disenchantment and even vituperation has now come, and the great name of Koch has gained no fresh laurels as yet from his discovery of tuberculin. Some of the more sanguine minds hope with Lauder Brunton that “Koch’s tuberculin may yet fulfil the hopes of its able and single-minded originator.” It is possible that, deprived of its dangerous elements, it may yet be of service in the treatment of tuberculosis. At any rate, a new line of research has been opened up, and discoveries of great importance may yet await the patient investigator of infective diseases and their germs.

Gentlemen, when I commenced this address I had no intention of saying so much, but, like all poor sermons, length is a distinguishing feature, and it is much harder to be terse than discursive. Before I close I should like to express my appreciation of the services of one to whom we are all indebted for the great success of last year’s work. I allude to our late secretary, Dr. McCarthy. Without him I should have been like a ship without a rudder. His foresight, discretion and diligence have made the position of President a comparatively easy one, and his published reports are a credit not only to himself but to the Society.

Gentlemen, again I thank you all for the kind manner you have borne with me, and I shall gladly retire into the back benches once more, from the obscurity of which, perhaps, it were wiser that I had never emerged.

## SHORTENING OF THE ROUND LIGAMENTS IN RETRO-POSITION OF THE UTERUS.\*

A TOTAL OF FIFTY-TWO CASES.

By T. JOHNSON-ALLOWAY, M.D.,

Instructor in Gynaecology, McGill University, Montreal.

In the July (1886) number of the MONTREAL MEDICAL JOURNAL, I reported a case of retro-position of the uterus which had resisted all other forms of treatment. The patient was found to be a confirmed invalid, unable to leave her house. The result of shortening the round ligaments in this case was good. It was the first case reported of the operation performed in this country. The patient has enjoyed excellent health ever since, now five years, and as my further experience since that operation has borne good fruit, I feel I am justified in repeating the concluding sentence of that monograph with the same convictions as I then wrote it. The words run thus:—

“I am firmly convinced that the day of treatment of retro-displacements and prolapse of the uterus with pessaries is fast drawing to an end.”

Since the publication of the paper referred to, I have, with all the care and energy I could command, pursued the line of action I had thus begun for the relief of this most distressing condition, and I can confidently assert that my expectations of success have been more than realized. They have been acknowledged by all who have been interested in this work, no matter how sceptical they were at first. The past history of my clinical work in this sphere will be expressed with extreme brevity, neither will I take into consideration other methods practised by eminent and respected surgeons for the relief of the lesion in question, because I believe them to be more difficult, dangerous and less efficient in obtaining ultimate good results. It should be a solid dictum in surgery of the present day that no man should open the peritoneal cavity to cure that which can be cured without. To be still more terse, if gentlemen who open the peritoneal cavity to suture the uterus to the anterior abdominal

\* Read before the Canadian Medical Association, at Montreal, September, 1891.

wall, as a routine practice, had to decide in the case of their own wives between the intra- and the extra-peritoneal operation, I think their decision would be rapidly arrived at.

Last year I published a record of twenty cases\* with results so satisfactory that I have been performing the operation up to the present time in every case of retro-position where the uterus was not firmly locked down in the pelvis by strong inflammatory adhesions, and it is a continuance of this experience which I wish to make the subject matter of this paper. Let us now consider the cases which are suitable for relief through the agency of this operation.

All cases of backward displacement of the uterus with or without descent,—in short, whenever the uterus is so placed as to receive the intra-abdominal weight upon its anterior face, the patient being in the standing or sitting posture. The strain upon the broad ligaments under these circumstances is very great and continuous, giving rise to the majority of local and reflex symptoms complained of. It will be understood when we draw the uterus strongly forward, and allow the intra-abdominal weight to fall into the posterior segment of the true pelvis, it will tend to float the uterus forwards and upwards. The posterior and lateral pouches of Douglas receiving and supporting the weight in the manner in which they were originally intended. In the normal condition, the function of the round ligaments is unquestionably to maintain the uterus and broad ligament in this state of forward inclination, thus forcing the abdominal contents to a great extent into the larger and stronger segment of the pelvis. Again, when the uterus and broad ligaments are held well forward by the round ligaments, the bladder is protected from direct intra-abdominal pressure and can rise without hindrance in the anterior segment of the pelvis during diastole. On the other hand, when this organ is dragged backwards and downwards to receive the full force of the pressure from above, we can understand the great difficulty it will have in performing its normal functions. Reasons of this nature will no doubt tend to explain to us the distressing bladder symptoms complained of by some patients afflicted with retro-position of the uterus.

---

\* Montreal Medical Journal, April 1890.



In determining whether the uterus is fixed in the pelvis or not, we should never form an opinion unless we fail to antevert it while the patient is under an anæsthetic. We have experienced cases where it was impossible by all known methods to influence the position of the uterus without causing unwarrantable suffering, without the aid of an anæsthetic, and it is surprising how easily its position can be changed when once the patient becomes profoundly anæsthetized. But should it be found impossible to change the position of the uterus under these circumstances we must not entertain the operation of shortening the round ligaments, but advise abdominal section as the only means of affording relief in view of finding that the appendages have been primarily the seat of disease.

*Dangers of the Operation.*—There is but one accident which can happen after this operation peculiar to itself, this is hernia; but from the improved methods which I will presently detail it should never occur. When we made large wounds and disturbed the external inguinal opening, in vaguely looking for something like the ligament, it was no wonder hernia followed. In the *Boston Medical and Surgical Journal*, Oct. 15th past, a case under the care of Dr. F. W. Johnson, of St. Elizabeth's Hospital, is reported, which is of considerable interest in regard to this point. In this case the canal was split up into the peritoneal cavity. This was done because the ligament on that side would not run. If there were adhesions preventing the running of the ligament they must have been within the pelvis, and the opening up of the canal could do no good. Since I have abandoned the old method of looking for the ligament *in the canal* I have never found a ligament which would not run, because I feel satisfied it is due to non-separation of its sheath and nerve. Very bad hernias must result after due time has elapsed in such cases as Dr. Johnson reports. Suppuration and sepsis may by possible accident occur in public hospital practice, but should never occur in private.

*Duration of the Operation.*—It should not take more than ten minutes for each side from the beginning of the excision to the closure of the wound. Lately I have accomplished the full work over each side, on an average, in about six minutes.

*Method of Performing the Operation.*—In regard to this question, I would say that it involves more in its individuality than any other. I have never been satisfied with methods taught by Alexander of Liverpool, Polk of New York, and others, and have held that the canal should never be opened or disturbed in searching for the ligament. When once the canal has been opened and the contents disturbed, it becomes a matter of mere accident our finding the structure sought for, and irreparable injury is done to the resisting qualities of the inguinal opening. The canal is not a hollow tube containing only the round ligament; it is a solid tube firmly packed with adipose and connective tissue, intended to fulfil a definite function, and we should not disturb its contents. These principles have guided me of late in performing the operation, and instead of opening the canal I simply make traction upon the fascia covering the external opening until I can see the ligament as it splits up to form this fascia. This method, if carefully carried out, is the most scientific, rapid in performance, and successful in results. When the fascial end of the ligament has been found very careful traction should be made upon it by means of hæmostatic forceps until it begins to show some increase in size. It now may be seized with the fingers, the nerve carefully sought for and divided. Traction should be continued as long as the ligament freely runs. The sutures should then be passed from side to side of the wound, including the pillars of the ring and half of the ligament in their bite. I use silkworm gut of salmon size, and find the needle more accurately and rapidly passed by sense of touch than by sight. Two sutures are all that should be required in each wound. A small catgut drain may be used in each wound for forty-eight hours if thought necessary. The dressings are not disturbed until a week or so after the operation, and the sutures are not removed until the third week. The patient should be cautioned against lifting or doing any work at her own home for at least three or four months after the operation. There are three important standpoints from which to regard this operation, viz. :—

1st. Does the uterus remain permanently forward?

2nd. Does the holding of the uterus and appendages forward afford relief to the series of grave symptoms complained of by the patient?

3rd. Does the shortening of the ligaments interfere with the progress of future pregnancies, and after convalescence from these pregnancies does the uterus return to retro-position?

1st. Yes, the uterus and appendages remain permanently forward. I have had two cases where the uterus became again retroverted some months after the patients returned to their homes. In both of these cases only one ligament was shortened. In one case I had opened the canal, but failed to find the right ligament. When the patient left the hospital the uterus was well forwards, but it afterwards swung round to the shortened side and dropped backward into the pelvis. In the other case, the patient took ether very badly and my anæsthetizer warned me not to proceed. This uterus also dropped somewhat backward, but not so far as it originally was; the patient, however, became much improved in health. Since this experience I have always insisted upon operating upon both sides before the patient returned to her home.

2nd. In regard to the second proposition—the relief of symptoms through the agency of the operation—I can only say that no procedure has given me more satisfactory results, and it has been especially so in regard to the relief of distressing reflected nerve symptoms, induced by long-continued chronic invalidism. I do not know, however, that such good results were attained in every case through the agency of this operation alone, as I had in a large majority of cases performed excisions of the cervix and colporrhaphy at the same sitting, which should always be done in suitable cases, but I have had no failure to relieve symptoms in cases of unmarried young women with retro-displacement. In passing, I may here state that this form of displacement is much more common than is generally suspected, in young delicate girls who are engaged in the performance of men's work to obtain a living.

3rd. In regard to the last proposition—the influence of the operation upon future pregnancies—I can confidently say that

it has none but the most happy. I have confined personally a few cases upon whom I had previously operated, and in every case pregnancy in its entire course was a happy one, and in no case did the uterus drop backward after convalescence had been passed through,—it remained anteverted.

---

## A FEW NOTES ON THE THERAPEUTICS OF COD-LIVER OIL.

By T. SIMPSON, M.D.,

Consulting Physician to the Montreal General Hospital, &c.

Perhaps there is no remedy of its class which has been so universally prescribed and used as cod-liver oil. It has been recommended in almost every disease to which flesh is heir, both as an external application and as an internal remedy. And this has been going on from time immemorial. The fat of fishes was used as a remedy in the days of Pliny, and for over a hundred years just past, its steady employment, with scarcely a break, in rheumatism and in disorders having an origin in struma has obtained.

As an evidence of its extended use, I may mention that a middle-aged man whom I met on the north shore of Lake Superior thirty-five years ago, informed me that as far back as his memory carried him the fat of certain fishes caught on that coast, and especially the livers, were fed to the emaciated and those suffering from diseases of the chest, accompanied by cough, by the fishermen, who at that time were nearly all natives or "half-breeds." I could not discover how far back this plan of treatment extended, or whether or not it had been introduced by the whites. It must, however, be admitted that a knowledge of, and faith in, the virtues of cod-liver oil as a remedy extended far and wide, and have existed for ages. It follows also that there must be a solid basis for such opinions.

I have just said that it has been used, at one time or another, in almost all diseases: and whilst on the one hand its more than common use is a direct compliment to its efficacy, on the other hand an injudicious and indiscriminate administration has frequently brought it into undeserved disrepute.

Broadly, it may be said that cod-liver oil is indicated in a very large class of subacute and chronic disease in which emaciation and debility are prominent, accompanied by, or resulting from, malassimilation of food, or perverted nutrition.

In various forms of tuberculosis, including those of the skin, and notably lupus, in rachitis, in tardy ossification of the bones and growth of the teeth in children, often accompanied by tumid liver and abdomen, in softening of the bones in adults, in a variety of skin diseases, notably psoriasis, occurring in children and young women ill-nourished or emaciated, or tainted by scrofula or syphilis, it is indicated. I have known it, when judiciously administered, remove most extensive psoriasis, after the failure of the usual remedies, including arsenic and chrysophanic acid.

As a purely local application, I am satisfied that it does not possess any property which would compensate for the uncleanly and malodorous practice; nevertheless cases occasionally, though rarely, occur, in which it is advisable, failing other means, to attempt its introduction into the system by inunction. It is, however, a most unsatisfactory method.

In chronic arthritis, and in the chronic and scarcely inflammatory musculo-fibrous rheumatism of the aged and debilitated, accompanied by rigidity of the muscles and stiffness of the joints, the medicine is indicated, and will often procure decided relief of pain and more or less relaxation of the muscles and joints.

But it is as a remedial agent in the treatment of pulmonary consumption and certain chronic bronchial ailments—especially such as are attended by copious muco-purulent expectoration—that cod-liver oil has acquired its reputation, and although its beneficial action is doubtless owing chiefly to its nutrient qualities, still it possesses others in addition. It has been found that bland and wholesome oils—olive and others—admirably adapted for fat foods, when readily assimilated, increase the weight and strength of the patient. But cod-liver oil does this and more; it promotes assimilation, lessens waste of tissues, often restores appetite, and diminishes cough and expectoration. It favours

the expulsion of tuberculous matter, as well as lessens the tendency to its formation. In short, in favorable cases, when the stomach is in fair working condition, it ameliorates all the symptoms and in some cases restores health. Unfortunately these latter are decidedly few in number, especially among persons inheriting the tuberculous diathesis; nevertheless many persons live for years in comparative comfort, owing chiefly to the persistent and judicious use of the oil. The disease is not cured, but held in check.

It has been charged with the production of hæmoptysis by enriching the blood and increasing the number of red corpuscles, in this way inducing local hyperæmia in parts adjacent to tuberculous deposit, but as hæmoptysis frequently occurs in phthisis where no medication has been used—is often the first symptom of its presence—I am not disposed to attach much importance to the charge. Its use, however, should be suspended during hæmoptysis or the supervention of any acute intrathoracic inflammation. Its whole action on the economy is what may be called altero-nutritive, and whilst it cannot be pretended that it has any direct and local effect on the bacilli of tubercle, it may under favourable circumstances render their breeding and feeding ground untenable.

Its marked alterative action and influence on digestion over other fats is accounted for by the presence of bile constituents and other substances, chiefly bromine, iodine, iron and phosphorus in a certain combination. There are said to be also one or two "peculiar principles." Doubtless the oil often suffers from over "purification," some of its important constituents being eliminated during the process.

Unfortunately the taste and odour of cod-liver oil are most unpleasant, even to the exciting of nausea in many persons. In others unaffected in this way, the stomach rebels, consequently various plans have been devised to conceal these objectionable qualities, and without altering the chemical constitution, to present the oil in a more acceptable form. With this end in view, numberless mixtures, emulsions and extracts of various flavours, strengths and compositions have been offered to the public.

Among these preparations is an excellent one manufactured by the Davis & Lawrence Company of Montreal, called the "D. & L. Emulsion of Cod Liver Oil, with Hypophosphites of Lime and Soda," which I have used freely for the past two years owing to its agreeable appearance, not unpleasant taste, and evident therapeutic qualities. It has the colour and consistence of thick cream, and, I am creditably informed, contains 50 per cent. of Norway oil, well broken up in glycerine and mucilage; in addition there are six grains each of the hypophosphites of lime and soda to the ounce. Most children take it without trouble, and anyone who has the management of children will understand what a boon this is to both patient and nurse. I have used it in cases where the pure oil for some valid reason could not be borne, and it is especially indicated in such diseases of the bones as have been mentioned, and in certain neuroses with emaciation, the result of excessive brain work, worry or specific taint. The presence of the hypophosphites adds no doubt to its potency in these latter diseases.

As has been already pointed out, cod liver oil is not only an efficient remedy, but in a degree an admirable food, and advantage is taken of this fact to use it largely as a preventative. Children and young people without active disease, but having so-called delicate lungs, whether acquired or inherited, who in this northern and changeable climate are subject, during sudden alternations of temperature and moisture, to bronchial and catarrhal troubles, and to that insidious and alarming complaint, common croup, are saved many an attack and permanently benefitted by its judicious use during the cold seasons of the year, but more particularly, perhaps, during the autumn and early spring. I am in the habit of ordering for delicate children, referred to above, from a teaspoon to a dessertspoonful of the "D. & L. Emulsion" each night at bedtime, and keep this up, with occasional intermissions of a day or two, for months.

As regards the administration of cod liver oil—this alterative food—in individual cases, I shall say that the same experience, judgment and watchfulness on the part of the physician are necessary in this plan of treatment as in any other rational mode.

The same regard to accessories, environment, and to the idiosyncrasies of the patient.

In closing these few notes—which, it is needless to say, do not contain anything new in the proper meaning of the word, or any attempt at completeness on the part of the writer—it may not be amiss, in these days of “new remedies” and fancy ephemeral theories so captivating to the young and enthusiastic, and, for that matter, to many of the older members of the profession, to suggest that we should pause for a moment now and then—but by no means stand still—and turn our attention backwards to old and tried friends, to remember how often they have stood us in good stead, and although they have not the gloss and insinuating flavour of the new remedies, with which it is attempted to supplant them, they are yet sturdy helpmates, whose usefulness is neither to be despised nor belittled.



## Reviews and Notices of Books.

**Handbook of Diseases of the Ear,** For the use of Students and Practitioners. By URBAN PRITCHARD, M.D. (Edin.), F.R.C.S. (Eng.) Second edition, with illustrations. London: H. K. Lewis, 136 Gower St., W.C. 1891.

The need of a thoroughly reliable handbook on diseases of the ear for the use of the student and busy practitioner is greatly felt, and the second edition of so valuable a book as the present one is warmly welcomed. This edition is thoroughly practical, entering into no detail which the student should not be familiar with, and the views expressed are those which are recognized and accepted at the present day. The print is of good type and the illustrations well executed. We most heartily recommend this book to all students and practitioners as being, without exception, the book best suited to their wants.

**Minor Surgery and Bandaging.** By HY. R. WHARTON, M.D. Philadelphia: Lea Brothers & Co. 1891.

This little work is in every way an excellent one, and up to date. The part on bandaging is very complete, and illustrated by a number of remarkably clear photographs. Besides minor surgery and bandaging, fractures, dislocations, ligation of arteries and amputations are shortly treated of in well written articles, profusely illustrated. We can honestly recommend this book to students and practitioners. The hospital student and dresser will find it invaluable.

**Stories of a Country Doctor.** By WILLIS P. KING, M.D., First Vice-President of American Medical Association. With illustrations. Philadelphia: Hummel & Parmele. '91.

Dr. King dedicates his collection of stories to the progressive, good, conscientious and true men of the medical profession of the United States. The stories are amusing, for the Doctor in this case gained his experience of human nature in its crude forms while practising his profession in the far West, upon the outskirts of civilization, right after the civil war. It would have

been better had the publishers seen fit to omit the numerous advertisements of patent medicines, for they do not ornament even a book of this description.

---

## Society Proceedings.

### AMERICAN ORTHOPÆDIC ASSOCIATION.

FIFTH ANNUAL SESSION,

*Held at Washington, D.C. Sept. 22, 23, 24 and 25, 1891.*

#### ORTHOPÆDIC SURGERY AS A SPECIALTY.

Dr. A. B. Judson of New York, in the President's address, said that orthopædic surgery is specially the domain of physical demonstration, where subjective symptoms give place to objective signs, where treatment is chiefly mechanical, and where results are recorded in degrees of a circle and fractions of an inch. It exists and thrives as a specialty, because the general practitioner concurs with the public in committing patients who, from the nature of the case, generally recover with some deformity and disability to the care of experts.

Dr. N. M. Shaffer of New York defined orthopædic surgery as that department of surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary.

Dr. V. P. Gibney of New York proposed a definition as follows: That department of general surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities.

#### ORTHOPÆDIC NOSOLOGY.

Dr. W. R. Townsend of New York advised the construction of a uniform nomenclature for orthopædic affections, to facilitate the taking of histories and to increase the value of reported cases. A committee was appointed for this purpose.

#### THE LATE MR. THOMAS.

Dr. A. J. Steele of St. Louis paid a friendly tribute to the late Mr. Thomas of Liverpool, a corresponding member of the Association, whose methods have been so widely discussed, and whose influence is felt in many branches of orthopædic practice.

#### CRURAL ASYMMETRY AND LATERAL CURVATURE.

Dr. H. L. Taylor of New York described two instances in

which the leg was 2 inches and  $1\frac{1}{2}$  inches short respectively. Both cases were in young women. The short limb was larger and stronger; the shortening was chiefly below the knee, and there was no lateral curvature.

Dr. A. Hoffa of Wurzburg, Germany, described a specimen which proved that in one instance the shortness was due to union of the neck and shaft of the femur at an acute instead of an oblique angle.

Dr. F. Beely of Berlin illustrated with specimens of lateral curvature and ingenious models the changes which occur in the bodies of the vertebræ preceding rotation, explaining how the paraspinous sulcus is shallow and broad on the concave, and deep and narrow on the convex sides, a condition which is reversed in the lumbar region by the absence of ribs.

#### SPINA BIFIDA AND CLUB-FEET.

Dr. H. A. Wilson of Philadelphia related the case of a child of four years. The ordinary methods of reducing the deformity of the feet excited suppuration, which resisted treatment for six months, as long as the patient remained under observation. There were sensory paralysis and deficient circulation in the lower extremities. The same intolerance of surgical treatment thwarted all attempts to treat the spinal tumour.

Dr. L. A. Weigel of Rochester had had similar trouble with a similar case, but found that when the child was older it was possible to treat the deformity of the feet with success.

Dr. A. E. Hoadley of Chicago related a case of spina bifida, in which good result had followed an operation in which he did not attempt to repair the vertebral deficiency, but had simply turned up large flaps, and united them by silk sutures.

Dr. T. M. L. Chrystie of New York reported a case of congenital equino-varus, with absence of great toe and contiguous bones of the instep. Mechanical treatment speedily reduced the deformity, with a gain of symmetrical gait.

Dr. W. E. Wirt of Cleveland related an interesting and unusual case of club-hand and club-foot, with other congenital malformations.

Dr. Hoffa said it was evident that all cases of club-foot do not have the same causation. The cases reported were due to some fault in the earliest stages of development.

#### SPASTIC PARALYSIS AND SPINA BIFIDA.

Dr. W. N. Bullard of Boston reported a successful operation by Dr. C. L. Scudder of Boston for the relief of spastic paraplegia in a child with spina bifida. He thought the paraplegia

was not due directly to the spina bifida, but to the accompanying hydrocephalus. He advocated electrical treatment, and faradization, rather than galvanism.

Dr. Weigel reported a case in which division of all shortened tissues and the use of a brace had secured a favourable result.

#### DEFORMITY AFTER KNEE-JOINT EXCISION.

Dr. J. C. Schapps of Brooklyn said that after excision the two united epiphyses make a mass of soft bone, in each end of which is inserted a long lever. With this leverage it is possible to restore and maintain a straight limb by simple mechanical treatment.

Dr. A. M. Phelps of New York thought that recurrence of deformity can be prevented by liberal resection of the hamstrings.

Dr. Hoffa said that relapse often occurs from incomplete removal of diseased tissue, and that when excision is done in early life, and all disease removed, marked shortening will not occur.

Dr. Beely said that flexion could be prevented by over-correction, but at the risk of further over-correction as the result of locomotion. Apparatus designed to prevent recurrence of deformity should relieve the limb from the weight of the body.

Dr. Taylor objected to free division of the hamstrings, as these muscles are useful in balancing the pelvis on the femur, even after motion at the knee is abolished.

Dr. J. D. Griffith of Kansas City had prevented flexion by removing all the disease and without dividing the hamstrings.

Dr. Schapps said that in many patients under ten years, excision was to be preferred to mechanical treatment.

#### KNEE TROUBLES IN LOCOMOTION.

Dr. Shaffer related a number of cases in which an elongated patellar ligament had caused pain and difficulty in locomotion.

Dr. A. M. Vance of Louisville thought that the ligament might become shorter if not constantly stretched by use. Rest was indicated.

Dr. Gibney cited a case in which rest for one and a half years had not caused shortening.

Dr. Shaffer said his patients had been benefited by giving lateral support, thus converting the joint into a true hinge.

#### ATROPHY IN JOINT DISEASE.

Dr. E. G. Brackett of Boston argued that atrophy is due to disease and not entirely to reflex irritation.

Dr. A. G. Cook of Hartford said that atrophy of the foot, often very marked, can be only the atrophy of disease.

Dr. J. K. Young of Philadelphia believed that the atrophy in question is the result of reflex interference with nutrition. In hip disease, it appears first in the thigh muscles, especially the adductors.

#### ATROPHIC ELONGATION.

Dr. Roswell Park of Buffalo described the atrophic elongation conspicuous in the lower extremity. As the result of disuse from disease, with avoidance of pressure on the bone ends, the bone lengthens more rapidly than its fellow. This is illustrated in growing children with disease of the tibia or femur, and is noticeable in some cases of hip disease.

#### TREATMENT OF HIP DISEASE.

Dr. Phelps said that traction and fixation should be enforced to prevent destruction by intra-articular pressure. Ankylosis is the result, not of fixation, but of disease. The patient should be put to bed from three weeks to four months, and should then wear the lateral traction fixation splint, which was exhibited. Children under three years are placed in the plaster-of-Paris portable bed, which was also shown.

Dr. Wirt exhibited a new device for traction, in which the force of the lever is changed into rectilinear instead of circular motion, without key, screw-driver, wrench, buckle or strap.

Dr. R. H. Sayre of New York said the invention gave accurate and easy adjustment in the direction of traction, but in the direction of relaxation the control was defective.

Dr. A. J. Gillette of St. Paul was satisfied with the results obtained by the use of 'Thomas' splint.

Dr. Vance said he practiced fixation at the hip, but believed much depended on the surroundings of the patient.

Dr. Shaffer believed the best results can be obtained by the use of the long Taylor traction splint. He thought results should not be reported till six years had passed, as relapses were not uncommon.

Dr. Ridlon of New York said a splint should secure immobilization by antero-posterior leverage, as in 'Thomas' splint, by an action identical with that of the Taylor spinal brace.

Dr. Steele approved of the combination of the English method of rest with the American plan of traction.

Dr. Taylor practiced rest in bed with traction in the acute stage, to be followed by a splint which allows locomotion.

Dr. Sayre thought but few cases required lateral traction. When the inflammation had ceased he applied passive motion. If the pain and tenderness following last more than twenty-four hours, the passive motion had not been rightly used.

Dr. E. M. Moore of Rochester believed that a joint only moderately inflamed demands motion. He employed traction with a certain amount of motion.

#### CONGENITAL DISLOCATION OF THE HIP.

Dr. Phelps exhibited apparatus for the treatment of this affection, and described his method and its results.

Dr. E. H. Bradford of Boston had modified the apparatus in previous use by adding an appliance with which the patient is allowed to walk about. The joint is thus protected, as in convalescence, from hip disease. Those appliances he had made of aluminum for the sake of lightness.

Dr. C. C. Foster of Cambridge said the best recorded result had been obtained by Dr. Buckminster Brown, whose patient was treated by mechanical means in bed.

Dr. A. Hoffa had operated by deepening the acetabulum, which is practicable from the thickness of the pelvis at this point. At first he sowed a periosteal flap over the trochanter, but this is unnecessary. Two month ago he examined his first case, two years after the operation, and found a movable joint, freedom from the characteristic gait, and absence of lordosis.

Mr. Howard Marsh of London divided these cases into (1) those in which the bone slips about on the wall of the pelvis, and (2) those in which it is fixed. The majority belong to the second class, and in these, operation is useless, but is more properly applicable to those cases of the first class in which the head is high up and movable. The anterior position is the most favourable, because lordosis, which depends on the backward displacement of the head of the femur, is absent.

Dr. Ridlon said that, as subjects for treatment, anterior dislocations are more hopeless than posterior ones,

Dr. De F. Willard of Philadelphia said treatment should be by forcible attempts at reduction to excite inflammation, followed by traction and systematic exercise.

#### MALIGNANT DISEASE AND POTTS' DISEASE.

Dr. Judson reported three cases in which Potts' disease and malignant disease of the vertebræ had been confounded by himself and other observers. In one, the diagnosis was made ante-mortem. The patients were 4½, 35, and 42 years respectively. The chief diagnostic points are—(1) Deformity present in Potts'

disease, absent in malignant disease ; (2) local disability ; and (3) local pain, both absent in Potts', and present in malignant disease.

Dr. Willard had seen two cases in which his diagnosis was confirmed post-mortem.

Dr. Gibney reported a case in a man of 40 years, in which he and others had been baffled in diagnosis. There was sarcoma of the fifth and sixth cervical vertebræ.

Mr. Marsh related the case of a child which was extremely difficult to diagnosticate, and which proved to be malignant in character.

#### SYPHILITIC POTTS' DISEASE.

Dr. Ridlon said that in this form the onset is more rapid, the pain and disability greater, the kyphosis sharper in outline, and abscesses often appear before deformity. If recognized lesions of hereditary or tertiary taint are present, treatment should be by large doses of mercury and iodide of potassium.

Dr. B. Lee of Philadelphia referred to cases of this origin which had come under his observation.

#### POTTS' DISEASE IN THE OLD.

Mr. Marsh had observed instances of suppurative tuberculosis in the metacarpus, tarsus, testis, cervical glands, knee and hip in eight patients between 63 and seventy-three years. But senile tuberculosis of the spine is most rare. He had seen two cases. The patients were 64 and 65 years respectively. The College of Surgeons of London possessed an osseous specimen of the action of senile tuberculosis of the upper cervical vertebræ. In his "Studies of Old Case-Books," Sir James Paget had recorded a case of Potts' disease in a gentleman of 55, attended with angular curvature.

Dr. Sayre recalled the case of a patient, aged 55, who recovered from Potts' disease with paraplegia and abscesses.

#### POTTS' DISEASE WITH PREGNANCY.

Dr. T. H. Myers of New York had collected twenty-five cases of labour in fifteen patients recovered from Potts' disease. In no instance did series recur. But of seven cases in which the disease developed during pregnancy, three died and three were left paraplegic. Normal parturition often follows in cases of deformed pelvis whose measurement would indicate that it was impossible. These patients should be examined by the obstetrician early in gestation.

Dr. Taylor knew of many cured patients whose marriage had been followed by the birth of healthy children.

Dr. G. W. Ryan of Cincinnati thought it was a question of allowing the tuberculous to marry. He knew of married women, deformed by Potts' disease, who had borne and raised healthy children.

Dr. Steele said one of his patients recovered from Potts' disease had borne six healthy children.

Dr. Lee said that one of his patients, with a large lumbar kyphosis, had borne twelve children, who, with the mother, are all in good health. He thought Potts' disease, even in the lumbar region, rarely produced narrowing of the pelvis.

Dr. Vance had seen a number of cases in which this deformity had not made labor of more than average difficulty.

#### PARAPLEGIA IN POTTS' DISEASE.

Dr. Brackett said that relief from paraplegia may be confidently expected from continuous extension and fixation, even in cases of eighteen months standing. This should be continued for some time after recovery.

Dr. Young reported two cases of complete recovery in which there had been absence of sensation, a feature always of grave import.

Dr. Shaffer referred to a case in which the autopsy showed that a portion of the eighth dorsal vertebra had nearly cut through the cord, leaving but a slender thread.

Dr. Hoffa said that in these cases the spine should be put absolutely at rest. He had collected thirteen operations within the vertebral canal. Two died at once, two recovered, and would perhaps have done so any way. In the others there were immediate good results, but relapses soon occurred. The operation has no great future before it, and should be limited to these cases in which the processes alone are affected.

Dr. S. Ketch of New York had now under treatment a patient who had been paraplegic for five years, but he still maintained a hope of effecting a recovery.

Dr. Hoffa suggested that an abscess may be exerting pressure on the cord.

Mr. Marsh said paralysis rarely depends on the pressure of an abscess; but (1) on softening of the cord, (2) pressure of a displaced sequestrum, and (3) most common, on pressure from exudation. He would only operate after thorough trial of rest.

Dr. Willard said we could not absolutely diagnosticate the cause. When there are extensive inflammatory deposits about the arches, laminectomy may relieve the posterior pressure and allow expansion of the cord.



Dr. Lee said that in all cases of this form of paraplegia suspension would materially hasten recovery.

#### ABSCESSSES IN POTTS' DISEASE.

Dr. Townsend thought that, as a rule, these abscesses should not be opened. In some cases aspiration should be done, and in others the cavity should be opened and drained to prevent sepsis and danger to life. His views were based on the history of 380 patients, 75 of whom had abscesses.

Dr. Young suggested the division of lumbar abscesses into external and internal, according to their relation to the psoas fascia.

Dr. Vance advocated aspiration, repeated as often as fluid is detected. In this way he cures three out of five cases. The depot is thus kept small, and the extent of subsequent operations, if necessary, is limited.

Mr. Marsh had rarely obtained a good result by the use of the aspirator. In his observation it is best to open freely, evacuate thoroughly, and then apply pressure to assist in closing the cavity.

Dr. Ryan said he had found aspiration to be a poor dependence. When interference becomes necessary, he believed incision to be the most conservative and effective procedure.

Dr. B. E. Hadra of Galveston said that on general surgical principles, such abscesses should be evacuated.

Dr. Willard would let dormant and caseating foci alone; liquefying collections he would aspirate and inject with iodoform emulsion, and if true pus were present, he would incise, wash out with sublimate solution, and avoid undue manipulation which might cause fissures which would let the tuberculous poison into the system. He would then suture the incision and inject iodoform and boiled olive oil.

Dr. Bradford said that while he did not think the danger from opening large abscesses was so great as had been thought by some, he was aware that absorption of such abscesses is not at all uncommon.

Dr. J. E. Moore of Minneapolis said the evacuation of a spinal abscess is a matter of great surgical responsibility, as it is an aseptic cavity, difficult to protect from infection after operation.

Dr. Hoffa would open only those abscesses which cause severe pain, or are likely to give rise to septicæmia.

Dr. Lee would never open an abscess of this kind unless compelled to by the conditions mentioned by the last speaker.

Dr. Ketch said there was danger that in our anxiety to treat a secondary feature, we neglect the disease itself.

Dr. Shaffer would not say that incision was never advisable, but generally it is wrong to open one of these abscesses. A very large abscess cannot be washed out, and its disappearance may be confidently expected, especially if efficient mechanical treatment is practicable.

Dr. Myers said it was proven (1) that it is impossible to completely remove bacilli from the abscess cavity, and (2) that bacilli-infected wounds at times heals primarily. Infection is more imminent after incision, because the wound lays open channels of absorption.

#### WIRING THE VERTEBRAL PROCESSES.

Dr. Hadra suggested that the spinous processes at the seat of the disease be exposed and then firmly wired together to secure rest and prevent deformity. The operation, as he had performed it for fracture of the cervical spine, was extremely simple and effective.

Dr. Sayre thought the wires would not bear enough force to remove the weight from the vertebral bodies, and that outside protection would be necessary to prevent lateral and rotatory disturbance.

Dr. Judson thought it was a question whether wiring was applicable through the long periods in which consolidation is delayed. Intolerance of the skin always prevents such pressure as we would like to make on the kyphosis. The method proposed circumvents this difficulty.

Dr. R. Whitman of New York said that due consideration should be given to the difference in development between the growing and adult spine.

Dr. Ketch did not see how the proposed operation could take the place of apparatus.

Dr. Moore said it was a most simple and harmless procedure, and, notwithstanding the theoretical objections, he would accept the first favourable occasion to try it.

#### PROGNOSIS AND TREATMENT OF POTTS' DISEASE.

Dr. Ketch had learned from 75 cured cases that in length of treatment and degree of deformity the upper region of the spine is most favourable, and the middle least of all, that paraplegia more frequently accompanies disease in the upper than in the lower regions, and that cases of traumatic origin recover sooner than those of tubercular origin. Sudden deaths sometimes occur in cervical caries from interference with respiration.

Dr. B. Bartow of Buffalo said that the earliest important sign in the dorsal and lumbar regions is lateral curvature, dependent

on nervous tenderness. Apparatus should be constructed to oppose the rotation accompanying the lateral curvature, as well as the antero-posterior deformity. He used the plaster-of-Paris jacket applied to effect the above objects.

Dr. Foster said that extension in bed is the best method in the acute stage. Extension should be made by light weights, the cords leading over the head and foot of the bed and attached to waist-belts, chest-belts, and head-straps.

Dr. Weigel reported a case of cervical Potts' disease, with abscess and paraplegia, successfully treated by extension in bed.

Dr. Ridlon had kept patients in bed from three to four years, and had never seen a case which was not benefited generally and locally.

Dr. Ryan said recumbency was the ideal treatment, but it is in many cases impracticable. He had found split plaster jackets efficient after the acute stage.

Dr. Lee said that many years ago, when the plan had fallen into entire disuse, he was the first to adopt suspension from the practice of Dr. J. K. Mitchell. The apparatus was Le Vacher's head support and jury-mast, attached to a chair or go-cart, or to a door-way swing.

Dr. Sayre said that in the cervical and upper dorsal region, a metal posterior splint supported on the pelvis should be used with a jury-mast, and in the lower dorsal and lumbar regions a plaster-of-Paris jacket with a jury-mast. Recumbency should be practiced in the acute stage; children should be placed in the wire cuirass.

Dr. Ketch had been disappointed with the plaster-of-Paris and jury-mast in the cervical and upper dorsal region. He commended the Taylor apparatus and chin-piece. In the lumbar region almost any supporting apparatus will secure a good result.

Dr. Taylor said that the antero-posterior lever secures rest and protection and combats deformity. Old and neglected cases are especially amenable to treatment, as ankylosis is later and rarer than is generally supposed. Abscesses and paraplegia do not forbid a favourable prognosis.

Dr. Bradford said that the plaster-of-Paris jacket was the readiest method, but had its disadvantages; that a steel brace gave better support, but demanded more skill and care; and that recumbency was the surest way to prevent deformity, but, as a rule, was impracticable for the long periods covered by the disease.

#### TYPHOID SPINE.

Dr. Gibney reported an additional case of typhoid spine in a

man of 45 years, in which, different from the cases previously reported, there was marked deformity in the cervical region, dating back to typhoid fever at the age of 22. Two years of pain and disability had immediately succeeded the typhoid attack. Usually the symptoms had not appeared till one or two months after the fever.

Dr. Hadra recalled an epidemic of typhoid with so much tenderness on pressure of the vertebræ that the affection was at first thought to be meningitis.

#### RHEUMATIC SPONDYLITIS.

Dr. Ryan said that this rare affection should not be confounded with rheumatoid arthritis of the spine. It is usually accompanied by rheumatic manifestations elsewhere. In the early stage, the symptoms resemble those of tubercular spondylitis. Later, the deformity is not angular, but resembles that of senile kyphosis. Treatment should be directed to the relief of pain by support, cauterization, and medication. In the chronic form, when pain has lessened, mobility should be encouraged by passive motion.

Dr. Hoadley deplored the confusion which is found in the nomenclature of these conditions which produce such a variety of results. He thought both rheumatism and osteo-arthritis were microbic diseases. If ligamentous structures interfere with motion, passive motion was proper.

Dr. Lee was reminded of a case which was at first thought to be spinal myalgia, but which proved to be gouty disease of the cartilages, an infrequent affection. Apparatus afforded relief, but, of course, not a cure.

Dr. Ryan said that gouty spondylitis is generally attended by manifestations in other parts of the body. He had failed to state that his patient had limited respiratory movements.

Dr. Vance related a case in which there was, in addition to the spinal affection, complete immobilization of the thorax with chiefly diaphragmatic respiration.

Dr. Bartow had seen a case in which relief was afforded by the spinal jacket.

Dr. Gillette reported a case which, at the first glance, resembled the deformity of Potts' disease, but which proved to be rachitic in its etiology. Improvement followed a few days after suspension was begun.

#### TORTICOLLIS.

Dr. Whitman inferred from the study of 264 cases that torticollis was more frequent in females than in males, and that the two sides of the neck were equally liable. Acquired torticollis, being often the result of suppurating cervical glands, should be

treated at first by mechanical support to secure rest and prevent deformity. Later, division of contracted parts, with careful after-treatment, should be practiced.

Dr. Hoffa said that cases of foetal origin have, immediately after birth, an atrophy of the face and head.

Dr. Whitman thought that the asymmetry of the face and head was a late feature of torticollis due to muscular action on the growing bones.

#### SACRO-ILIAC DISEASE.

Dr. Lee said the sequence of events is as follows: (1) injury of the synchondrosis, (2) subacute inflammation, (3) irritation of the nerves of the joint transmitted to the nearest plexus, and (4) resulting pain in the sciatic. The sciatica should be considered the result, not the cause, of all the troubles. In nine cases out of ten neuralgia is the effect and not the cause of any trouble. As stooping in sacro-iliac disease is injurious, he had devised a handy instrument with which the patient can pick up an object from the floor while remaining erect.

Dr. Benjamin Lee of Philadelphia was elected President, and Dr. John Ridlon of New York Secretary, for the ensuing year.

---

#### CANADIAN MEDICAL ASSOCIATION.

*Twenty-fourth Annual Meeting, held in Montreal, Sept. 16, 17 & 18.*

(Continued from page 308.)

#### FRIDAY AFTERNOON (18TH).

The President took the chair at 2.45 P.M.

Minutes of the morning session were read and confirmed.

Continuation of Dr. Alloway's paper.

Dr. Wm. Gardner has often performed the operation, but prefers the older operation of Emmet's when it can be done, although the operations are not interchangeable. When the cervix has undergone extensive cystic degeneration he would remove the diseased portion by a wedge-shaped incision, having the diseased surface correspond to the base of the wedge and then bring the edges together.

Dr. Laphorn Smith thinks there are advantages to be claimed for the newer operation, namely, that the elongated portion of the cervix that tended to press injuriously against the posterior vaginal wall was removed, and that tension was more effectually relieved.

Dr. Alloway replied. He also exhibited wax models illustrating the uterus before and after the operation, and also the different steps of the operation.

Dr. Small (Ottawa) read the report of a case of "Malignant Disease of the Uterus discovered at the Seventh Month of Pregnancy."

Dr. Laphorn Smith thought that the step between proliferating endometritis and cancer was a very short one, and the sooner an operation was performed the better. The delay which generally occurs was the great factor in the unfavourable results of operation. He believed that laceration of the cervix was one of the principal causes of epithelioma of the uterus. Many cases had come under his care of very severe laceration of the cervix which had been treated for a long time for ulceration; and the delicate mucous membrane of the cervical canal had been so irritated by caustics until it had become converted into cicatricial tissue of low vitality which readily underwent cancerous degeneration. He could not too strongly urge repair of a laceration as soon as discovered either by Emmet's operation or, when much cystic disease was present, by Scroeder's.

Dr. Wm. Gardner has had no experience of cancer occurring with pregnancy. He thinks there are very few cases in which the malignant disease is likely to be recognized in the early months of pregnancy.

Dr. Alloway said that to his mind the important point to be considered by the physician was whether to interfere at any time during the pregnancy or do all in his power to bring the patient to her full time. He thought that the great danger to be apprehended by interference was hemorrhage, and that the duty of the practitioner was to bring the patient to full term if possible. The life of the mother was already doomed. All of our endeavours should be directed to the interest of the child.

Dr. Powell said that in Dr. Alloway's remarks he saw the position in which the practitioner stood, and felt that he would take the advice favoured by him, namely, to avoid interference as long as possible, and do all in his power to carry the patient to full term.

Dr. Jas. Ross said it was a difficult matter to decide whether to interfere or to let pregnancy go on to full term, but he would rather incline to let it go on to full term, for then he thought there would be less liability to hemorrhage.

Dr. Small, in reply, said that Hermann recommended induction of labour as soon as possible.

Dr. Wyatt Johnston showed a simple apparatus for collecting samples of water for bacteriological examination at any desired depth below the surface. The apparatus consisted of a brass frame in which small glass-stoppered bottles could be held and the stopper lifted at the required depth and closed again by means of a spring. The apparatus was a modification

of a similar one devised by Dr. Ellis of Toronto, by which the construction was simplified and adapted to taking the samples more rapidly.

Dr. Wilkins read a paper on "Cold Baths in the Treatment of High Temperature in Typhoid Fever."

Dr. A. Ruttan (Napanee) said that for the last fifteen years he had been in the habit of using cold baths in all cases of typhoid fever when the temperature was high. He had been first led to begin the treatment by observing the unexpectedly favourable turn of a very severe case with high temperature and delirium, after the patient, a young girl, had escaped from the house in her night-dress and remained out during a cold night, having fallen asleep on the grass. When found she was shivering with cold, but her general condition was greatly improved, and no ill effects whatever followed the exposure. He had seen the most beneficial results from the treatment. When it was impossible to overcome the objections of the patients or their friends to the bath he would fill a napkin with pounded ice and apply it to the spine, rubbing it up and down the back till the temperature was lowered. He thought that this modification embodied the essential feature of the cold bath treatment, as a cooling of the central nervous system was, after all, the main object.

Dr. Powell (Ottawa) had had no experience with this form of treatment. The great objection was the difficulty of carrying it out in private practice. And also that it would be dangerous to allow the patient to stand up and walk to the bath when the heart was weakened by the fever.

Dr. Jas. Ross also objected to any exertion in typhoid fever, but if the treatment could be carried out otherwise there could be no objection.

Dr. Sloan asked for Dr. Stewart's opinion.

Dr. James Stewart said he had given close observation to the method of treatment by cold baths, and was convinced of its great value in typhoid fever. The great advantage was the shortening of the period of convalescence. He thought that it acted through the central nervous system, and that it was a purely scientific method of treatment. He complimented Dr. Ruttan on his success and perseverance.

Dr. Wilkins, in reply, advised reading a paper by Dr. Hare in the March number of the *Practitioner*, in which he reports 1700 cases treated at the Brisbane Hospital. He was delighted to hear of Dr. Ruttan's success. A skeleton bath could be obtained for \$6 or \$7 from any plumber. He did not allow patients to stand up except in the early stage of typhoid fever or in the case of robust patients. Sponging was very valuable in cases where the cold bath was unsuitable. The temperature of the cold bath was between 68° and 70° F.

Dr. Wyatt Johnston gave a short account of some examinations which he and Dr. H. D. Hamilton had made of the sputum of cases of heart disease. The sputum was frequently found to contain large epithelioid cells filled with brown pigment masses—the so-called “heart-failure cells” of E. Wagner. He considered that the diagnostic significance of these structures had been overlooked. They were uniformly present in cases where compensation was failing, and would probably afford a valuable prognostic indication in cases where applications for life insurance were entertained in spite of the existence of a heart murmur. They were not found in the conditions where traces of blood occurred in the sputum, except where hemorrhagic infarction was present—a condition most commonly met with, however, in heart disease. In a great many cases it was difficult to obtain any sputum, but this could be overcome with an intelligent patient by examining a little mucus hawked up from the back of the throat in the morning. If this was impossible a mild expectorant might be given.

Dr. Elder gave a brief summary of his paper on “Traumatic Separation of the Lower Epiphysis of the Femur.”

Dr. Shepherd thought the condition was very often confounded with dislocation.

Dr. McConnell read a paper on “A Case of Impacted Gallstones followed by Abscess of the Liver.”

The Rev. Dean Carmichael entered during the reading of the paper and was invited to take a seat on the platform.

Dr. Geo. Ross saw the case reported by Dr. McConnell, and was satisfied there was no malignant disease at the time when he recommended an operation, which was refused.

Dr. A. Laphorn Smith read a paper on “A Further Plea for the A.C.E. Mixture.”

Dr. Stirling consented to consider his paper as read—“Cerebral Abscess following Mastoiditis. Operation. Recovery.”

Dr. Proudfoot gave a brief summary of his paper on “Occlusion of Auditory Meatus by Hyperostosis.”

---

## OTTAWA MEDICO-CHIRURGICAL SOCIETY.

At the annual meeting of this Society, held on October 9th, the following gentlemen were elected office-bearers for the ensuing year:—President, Dr. L. C. Prevost; 1st Vice-President, Dr. W. C. Cousens; 2nd Vice-President, Dr. A. A. Henderson; Treasurer, Dr. R. W. Powell; Secretary, Dr. C. J. H. Chipman; Curator, Dr. J. A. Grant; Librarian, Dr. H. B. Small; Council, Drs. McDougall, Hurdman, Robillard, Dewar, Wright and Horsey.



## MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

*Annual Meeting, Oct. 9th, 1891.*

F. J. SHEPHERD, M.D., PRESIDENT, IN THE CHAIR.

The annual meeting for the year 1891-92 was held at the Society's rooms, 14 Phillips Square, on the above date. There were present: Drs. F. W. Campbell, Proudfoot, Perrigo, Laphorn Smith, Stirling, Jack, Springle, Kenneth Cameron, Wm. Gardner, Duquet, Guerin, J. H. Bell, Gurd, J. J. Gardner, A. D. Gardner, Muirhead, O'Connor, Kirkpatrick, Telfer, J. A. Hutchison, Reed, Mills, Jas. Stewart, Buller, DeCow, Allen, Kinloch, Lockhart, Geo. Brown, G. G. Campbell, Ed. Blackader, W. G. Stewart, A. Gardner, Roddick, J. A. MacDonald, Foley, and McCarthy.

The President having called the meeting to order, the following resolutions of regret at the death of Dr. Robert Townsend Godfrey were proposed by Dr. T. D. Reed, seconded by Dr. James Stewart, and carried unanimously:—

"That this Society has learned with the greatest regret of the death of Dr. Robert Townsend Godfrey, one of its founders, and a former president. Dr. Godfrey was a constant attendant, for many years, at the meetings of the Society, and at all times manifested his interest in scientific and practical work, by discussions and contributions. His very large experience in family practice made his opinions of great weight. His quiet, friendly manner and sympathetic words to his conferees endeared him to all who had the pleasure of his acquaintance.

"*Resolved*,—That our deepest sympathy be conveyed to his sorrowing family in this their time of mourning."

After the minutes of the preceding meeting had been read and adopted, Dr. Auger was elected a member.

The Treasurer (Dr. J. A. MacDonald) presented his annual report, which showed, notwithstanding some arrears, a fair sum to the credit of the Society. It was moved by Dr. Roddick, and seconded by Dr. J. J. Gardner, that the treasurer's report be adopted. Carried.

The retiring Secretary (Dr. McCarthy) stated that the regular fortnightly meetings of the Society had been duly held during the past year; that a greater number had taken part in the proceedings, and that the attendance had been greater than in previous years. The membership had considerably increased; no

less than sixteen new members were admitted, making to date a total membership of one hundred and eight members.

The address of the retiring President was announced for the next meeting.

Votes of thanks to the retiring president, vice-presidents, members of council, and secretary were then carried.

The following were elected office-bearers for the ensuing year :—

*President*—Dr. F. Buller.

*1st Vice-President*—Dr. James Stewart.

*2nd Vice-President*—Dr. E. P. Lachapelle.

*Secretary*—Dr. Kenneth Cameron.

*Treasurer*—Dr. J. A. MacDonald (re-elected).

*Librarian*—Dr. T. D. Reed.

*Council*—Drs. Perrigo, Wesley Mills and James Bell.

During the summer recess the Society held two special meetings, presided over by the President, Dr. F. J. Shepherd, to pass resolutions of condolence at the loss of two of its most active and esteemed members.

A special meeting was held August 5th, at which the following resolutions were unanimously adopted. Moved by Dr. Hingston, and seconded by Dr. Wesley Mills :

*Resolved*, that this Society records with the deepest regret its sense of the loss which it has sustained in the death of Dr. Richard Lea MacDonnell, one of the most able and efficient members, who not only took part in its debates, but by valuable papers contributed from time to time, added not a little to the progress of medical science.

*Resolved*, that, in the opinion of this Society, Dr. MacDonnell's death, at a time when his usefulness was greatest, is a loss to the medical profession of Canada, in which he took a high place as a teacher and writer, and earnest scientific investigator.

A special meeting was held August 12th, at which the following resolutions, moved by Dr. Geo. Ross and seconded by Dr. Roddick, were also unanimously carried :

*Resolved*, that this Society has learned with most profound regret of the death of Dr. Thomas Anderson Rodger, one of its most active members and a past president of the Society. Engaged in a wide and busy practice, Dr. Rodger was ever ready to discuss, from the advantageous standpoint of his large experience, the scientific points raised in the many papers brought before us. His hearty genial personality made him the friend of everyone, and his accustomed presence will long be missed among us.

*Stated Meeting, Oct. 23rd, 1891.*

F. BULLER, M.D., PRESIDENT, IN THE CHAIR.

*New Members.*—Drs. F. E. Devlin, A. E. Vipond and — Bruyère were elected members.

*Enchondroma of the Ilium.*—DR. SHEPHERD showed a young man, the subject of an enormous tumour growing from the left side of the pelvis. It had commenced eight years ago as a fixed tumour of doubtful origin; for four years it grew slowly, but for the last few months the growth has been very rapid and attended with much pain. It is nodulated and of bony hardness in places. It is an enchondroma springing from the periosteum of the ilium, and presents many difficulties for operation, as the greater part of the pelvis on that side would have to be removed. The hip-joint is unaffected, but the obstruction to circulation and pain down the leg indicate involvement of foramina. Rectal examination was negative, revealing no hard tumour.

Speaking of the occurrence of such tumours, Dr. Shepherd said that he had not seen one in this situation before, but that they were not uncommon on the scapula.

*Vesical Tumour and Calculi.*—DR. JAS. BELL exhibited a small tumour of the bladder, which was of interest in that it was associated with six calculi. The patient, a man of 68 years of age, had for the last eight years been passing large numbers of small, rough phosphatic calculi by the penis, but had never suffered from renal symptoms. The explanation of their source is, probably, that the rough surface of the tumour would become covered with a deposit, particles of which becoming detached formed nuclei for stones. The tumour was situated just within the bladder on the right lobe of the prostate.

*Vesical Calculus.*—DR. BELL also exhibited a calculus from a man, aged 73, who had been suffering great pain, and upon whom he had performed supra-pubic section as a preliminary for prostatectomy. He had not been previously examined for stone, and, in fact, it would have been very difficult to have discovered it, as the prostate projected one and a half inches into the bladder and in behind it lay the stone. The prostate presented a sloughing extremity, which was removed.

*Vesical Calculus.*—DR. SHEPHERD exhibited a calculus of a peculiar shape, being of the same size and thickness as a 25 cent piece. It had been removed from a man aged 70, from whom he had removed a stone two years before. The symptoms were obscure and the diagnosis was doubtful, and it was only after very careful examination that the stone was detected. The lateral operation was performed, and at first the stone could not be found, but was ultimately seized and withdrawn.

*Two Solid Ovarian Tumours.*—DR. WM. GARDNER exhibited these specimens. The first was from a patient, aged 59, who had consulted him last spring for symptoms of chronic cystitis. A tumour was easily discovered, which she said had been diagnosed eight years previously, and since then had not shown any growth. Under injections of arg. nit. the symptoms were relieved. She came back recently with a return of the symptoms, and had in her possession a concretion which she had passed by the urethra. This was sent to Dr. Ruttan for examination, and he reported that it contained nothing cystic, but was composed of fibrous tissue of some kind that had undergone calcareous degeneration. On opening the abdomen the tumour was found deep down in the pelvis, between the layers of the broad ligament on the left side, and resting against the base of the bladder. It was removed by enucleation. On examining the tumour, an opening was found which led to a cavity in which lay a concretion exactly similar, to the naked eye, to the one she had passed by the urethra, and which had probably ulcerated through into the bladder, though no evidences whatever could be found that the bladder had been opened. Dr. Johnston, after a microscopical examination, reported the tumour to be a pure fibroma of the ovary.

The second specimen was from a patient aged 60, mother of one child, born many years ago. There had been no suspicion of a growth until ten months ago, when on consulting her physician for abdominal symptoms he had discovered it. On opening the abdomen the tumour was found on the left side and had a convenient pedicle. There was one adhesion to the sigmoid flexure or upper part of the rectum, from which troublesome

hemorrhage occurred. There were no secondary growths found in the abdomen or pelvis. Dr. Johnston reported the tumour to be a malignant adenoma of the ovary. The prospects for this patient are not very good, though from the fact that the tumour was isolated, with a pedicle into which there was no extension of the disease, that there were no metastatic deposits, and from experience that the disease has not recurred in many similar cases, the patient's life may be saved. In cases where the indications or suspicions of malignancy are strong, operation should be performed with as little delay as possible.

*Late Perforation in Typhoid Fever.*—DR. LAFLEUR exhibited this specimen and gave the following report of the autopsy: Abdomen presented tympanitic distention, and percussion showed loss of liver dulness, an indication of gas in the peritoneal cavity. On opening the abdomen there was general purulent peritonitis, both the visceral and parietal peritoneum showing patches of ecchymoses; 50 c.c. of sero-pus removed; intestines agglutinated by a grayish-yellow fibrinous material. On opening the bowel, general characteristic typhoid ulceration was found extending for six feet above the ileo-cæcal valve and down to the rectum. It was late, probably about the middle of the fourth week, sloughs had already separated and healing had begun. About five or six inches above the valve a pin-hole perforation was found at the base of an ulcer, which was oval in shape and situated across the bowel, representing only a part of a Peyer's patch, the rest being quite normal. The whole of the ileum was weak, the muscular coat having become degenerated and œdematous, and as it was enormously distended with gas, it is not to be wondered at that perforation took place.

DR. JAMES STEWART stated that the patient, a young man, aged 25, an inebriate, had died on the fortieth day of the illness, having been in hospital for three weeks. The treatment for the last two weeks was solely by the cold bath. The only clinical evidence of perforation was the sudden fall of temperature from 101° to 96°, as the patient was in a stuporose condition and did not complain. Dr. Stewart regretted that the baths had not been given from the first, for though this form of treatment does

not seem to alter the course or duration of the disease, yet patients seem to recover better after it.

DR. HINGSTON asked if the temporary reduction of temperature is of unmixed value. He attributed greater importance to the temperature than to the pulse in surgical cases, and did not approve of sudden lowering.

DR. MCGANNON asked if warm bath treatment had been tried at the hospital.

DR. STEWART, in answer, stated that statistics proved that by this mode of treatment the mortality had been reduced 40 or 50 per cent. There is a great deal more than the reduction of temperature,—there is a marked benefit to the whole system, and patients so treated soon assume a different aspect to that which is so well known and characteristic of typhoid fever.

DR. LAFLEUR said that from the experience he had had of the treatment in the Johns Hopkins Hospital he fully agreed with Dr. Stewart. The clinical picture of one who has had the cold bath treatment is very different from one who has been treated otherwise. There is a general stimulating effect upon the circulation and upon the nervous system.

DR. SHEPHERD, the retiring president, then read his address. (See page 359.)

THE

# Montreal Medical Journal.

---

VOL. XX.

NOVEMBER, 1891.

No. 5.

---

## DR. BUCKE'S INTRODUCTORY ADDRESS.

In this prosaic age all things that do not make for material progress are apt to be considered of doubtful value. Among these, addresses to students at the opening of the college session have of late been regarded with a more or less sceptical eye. Naturally, in the hands of most men such addresses must be largely of the nature of an "oft-told tale." However, it is not to be forgotten that if the matter is old the listeners are new. But Dr. Bucke's address was not a repetition of old truths in a new dress, but a masterly presentation of the latest that science and philosophy has given to the world, set forth with the impress of one of the most original minds in Canada, and with a literary grace and power to which few men by any degree of effort could attain.

Beyond all question Dr. Bucke's address is the most profound dissertation that has ever been set before any body of medical men, old or young, in Canada. That such an elaborate and far-reaching discussion should have been listened to by the whole body of students, including the hundred freshmen, with unbroken attention is the best evidence of the advance medical students are making in grasp and thinking power, and at the same time the highest sort of tribute to the fitness of such an address. Well might Dr. Bucke have felt proud of his Alma Mater and of his profession; for he need not have gone back a third of a century to his own student days to have recalled a time when students would have considered such an address an unmeaning bore, at all events a large proportion of them.

In a few brief but most happy word-sketches he laid before his audience the personality of the men that laid the foundations of the present medical McGill. And O! how apt are we, in these progressive, but, alas! conceited, times, to forget the men of the past, in many respects our equals and in not a few our superiors. It is not so much, perhaps, an ungrateful as a forgetful age.

We will not spoil the perfection of this magnificent work of Dr. Bucke's by subjecting it to a dry analysis—nor attempt to reduce the complete body to a bare skeleton. With all the hard work of a now lengthy medical course before him the student needs at the outset of his career something to inspire him and incite to effort, something better than the terrors of a grinding examination which does not end with his own college.

There is a tendency springing up to deprecate lectures; everything must be practical—demonstrative. There is a good and a bad side to this. In our opinion the day will never come when we can dispense with the systematic lecture from the lips of one who really knows his subject and swells with the enthusiasm its pursuit begets. Yes—we are men as well as students, and so long as we are, we must come in contact with men as they *formulate* the teachings of the laboratory and the bedside. We want fewer lectures, but better ones, and fewer men attempting that for which they are not fitted by nature or by training. Dr. Bucke carried out the task he undertook as only a master in literature and philosophical thinking can. We think it would be well if there were more such minds in the medical profession; especially connected with teaching. How many men essay to teach whose efforts scarcely equal that of "the book," from which, indeed, they but retail without a suspicion of individuality (not to say originality), facts or principles they but faintly realize. Is it any wonder that their hearers get no inspiration? Yet is there any career in which there is more to interest a young man than a medical one, provided things are presented to him in the right way and the bugbear of examinations is not kept constantly before his eyes? Dr. Bucke's address illustrates how the most profound truths may be presented in a clear and fascinating



manner, and how the wide universe may be brought within the field of view of even the young student. May men of the Bucke type multiply in the profession!

---

### A MUNIFICENT DONATION.

The Montreal General Hospital will shortly receive the sum of one hundred thousand dollars, the benefaction being made in the will of the late George Chetwode Hamilton. This princely sum is left at the disposal of the Board of Managers, to be employed in such manner as will best conduce to the promotion of the work of the hospital. There are few cities that have been so highly favoured as Montreal in the promotion and foundation of educational and charitable institutions. Hardly a month passes by without a bequest of some tangible kind being recorded. The late Mr. Hamilton's large-hearted benevolence will place the Montreal General Hospital in a position to further extend its usefulness.

---

### Personal.

James Stewart, M.D., has been appointed to the chair of Clinical Medicine in McGill University.

A. D. Blackader, M.D., has been appointed to the chair of Materia Medica and Therapeutics in McGill University.

R. F. Ruttan, M.D., has been appointed Assistant Professor of Chemistry and Registrar in the Medical Faculty of McGill University.