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Original Communications.

OBSERVATIONS OF THE PROGRESS OF SURGERY IN OUR OWN DAY. *

BY DONALD MACLEAN, M.D., DETROIT.

The multiplicity of associations for the study and advancement of the many departments of science is one of the most striking and, I may add, most valuable features of the age in which we live. The marvellous improvements in the facilities for travelling have rendered this possible, so that surgery, not less than many other departments of modern science and art, is deeply indebted for its unprecedented advancement in our day, to the practical applications of that particular form of motion commonly called steam.

Not to do more than mention the production and dissemination of surgical literature thereby made practicable, the possibilities for personal contact and the interchange of opinions and experience, supplying and sustaining in ever-increasing degree the mighty stimulus of emulation, which have been secured to us through the beneficent power of steam, even we of the generation, who have seen and known all about it, sometimes I think fail to fully realize. Medical Associations as we have them, were not possible in former generations, and while many and various influences have combined to secure the unprecedented advance, which no one can deny that surgery has made in our day, my firm belief is that the union and communion between

* Read at the meeting of the Canadian Medical Association, Ottawa, Sept. 22, 1892.

different men and different schools, and different nations, rendered possible by the means referred to, is one of the greatest of all the powers which have worked together for the development and improvement of this the most directly humanitarian of all the arts and sciences.

But, while claiming for such associations as the "Canadian Medical," the most unstinted credit as a means of advancement, I am far from being so certain that such functions as the one which your kind and generous partiality has accorded to me, are to be regarded as the most effective or profitable mode of using the time and energies of the members.

I am an ardent advocate of such meetings as the present one. The reading and discussion of original papers, the reporting of cases, the exhibition of instruments and specimens, the congenial gathering of ourselves together, sometimes from long distances, the recalling of old associations and the forming of new, the hospitable and convivial breaking of bread and drinking of water in each other's society, the after dinner speech and all that that implies, I approve of with all my heart.

But when it comes to didactic addresses even on surgery, and the progress, and the wonder, and the glory thereof, I am not quite so clear, unless peradventure, the orator happens to have the power, genius and courage of a Tait to electrify his audience and the whole profession with the originality and, at the same time, the reasonableness of his revolutionary views as to the best ways and means of teaching surgery; or, the no less impressive force and grace of a Hingston, by virtue of which the mental eye of the greatest of all medical associations is persuaded to open widely in amazement and delight, as a system of aboriginal surgery, practised in the wilds of far-off America, is unfolded in language not less remarkable for its simplicity and clearness than for its eloquence and pathos.

Happy, indeed, are the orators who can deliver, and the associations which have the privilege of listening to such addresses. In undertaking to speak of the progress of surgery in our own time, it will at once become obvious that on such an occasion as the present, it is out of the question to attempt to do more than

mention a few of the more salient features of the theme as they happen to appear to the individual who, for the time being, has the floor.

To treat the subject exhaustively, or to any extent analytically, endeavoring to set forth in due form and in their proper order, chronologically or otherwise, the manifold steps and processes, and the parts played by different individuals, whereby the results in which we so much delight to glory have been attained, implies an effort transcendentally beyond the most latitudinarian estimate of the scope and aim of my present duty. The utmost that I can presume to attempt on the present occasion is the presentation of a few of the thoughts suggested to my own mind by the deliberate contemplation of some of the changes in surgical thought and practice which have taken place during the generation to which we happen to belong.

You and I have been interested spectators of, and more or less active participants in, a great contest with enemies of our common humanity of the most malevolent and uncompromising character. The battle commenced long before our day, and without doubt will continue to rage long after we have individually been forced to lay down our arms and pass over to that vast majority which has preceded us. In the meantime, however, we pause for a brief space in the thick of the fight for the purpose of permitting one of the rank and file the opportunity of recording a few of the impressions upon his own mind, respecting the progress of events in that part of the eternal struggle in which you and he have had the great honour of playing some part, each one according to his ability, whether that be greater or whether it be humbler.

In attempting to explain the rapid progress of surgery in recent times, and summing up the most powerful of the agencies by which this progress has been effected, large credit has been accorded to two or three data, which certainly have borne a sort of pivotal relation to the whole subject. These are, first, the discovery of anæsthetics, the influence of which is unquestionable and incalculable; the second is, in a word, bacteriology, of which it may be said, I think, that the influence for good has

been practically infinite; the third I have already mentioned, viz., steam, and of this agency I think it may be truly said that its influence has been at least as great as that of any other, not excepting even those just mentioned.

There are at least three other agencies of a general character whose influence has been, in my opinion, very great, although I don't think that they have always received the recognition to which they are justly entitled.

The first of these might be described as "Our inheritance by birthright." I refer to the great stimulus given to surgery by the life and works and teachings of such men as Sir Astley Cooper, Sir Benjamin Brodie, John Bell, the true progenitor of ovariotomy and all that that implies, Liston and Syme, Langenbeck and Desault, and many others who adorned the generation immediately preceding our own. If the torch of surgery has burned more brilliantly and effectively in our day than in any preceding age, to the inspiration supplied by these great men is due much of the credit. The stimulating and inspiring influence of their characters and labors has warmed into active, earnest and successful effort the Listers, the Senns, the Taits, and all the captains of the hosts of our own great and notable day and generation.

The second is the characteristic spirit of the age, which has had its effect upon other departments of science as well, and on surgery as much as any. I mean that spirit which is so well exemplified in the work of Darwin and his followers, who once for all demolished that stumbling-block in the way of scientific and philosophical progress, viz., the idolatry of authority with the resulting dread of original and independent speculation.

In our day surgeons, like the workers in other fields of science and art, have claimed the right to think and reason for themselves, and to pursue their speculations to their ultimate conclusions, and in so doing they have in large measure developed the faculty of judiciously estimating the proper relations between observed facts on the one hand, and speculative deductions therefrom on the other.

The day is past and gone forever when an observing and

thoughtful surgeon would tremble in the presence of his own observations, and refrain from reasoning out any theory based thereon to its logical conclusion and applying it in practice, lest peradventure it might land him in a contradiction of the previously accepted orthodox beliefs which, with all their accumulated load of inherited respectability, have been handed down to him to be carefully cherished and worshipped as the *ultima thule* of all truth and wisdom.

How many pathological, anatomical and surgical dogmas of the most venerable antiquity has our generation seen swept away like so many stumbling-blocks and rocks of offence in the benediction-laden ship of modern progress?

And in this great work may we not justly claim for the new world as large a meed of praise as for the old? Is it not a plain fact that the spirit of original investigation and independent speculation has been abroad in every section of this great western hemisphere, in consequence of which an amount and kind of surgical progress has been accomplished which has commanded the most respectful recognition from the whole world, and especially from those places in Europe which have hitherto been regarded as the very fountain sources of all medical and surgical truth?

This is one of the most remarkable, and to us at any rate, one of the most interesting features of this great surgical age. In times past American students have flocked to the European schools to complete their surgical education, and they do so yet, and undoubtedly with great advantage, nevertheless, the time has arrived when the necessity for such pilgrimages is becoming every day less and less apparent, and when the question is more and more asked, with ever-increasing show of reason, whether we are not in a position to make at least a reasonable return in kind for all that the East is able to bestow upon us, and to confer as valuable gifts upon the surgical pilgrim from Europe as American pilgrims were able to obtain there. The current has certainly begun to flow in this direction, and I am convinced that it will continue to do so until a course of American surgery will come to be regarded as indispensable to Europeans as in former times a European one has been to Americans. The beneficent results

which such a system of reciprocal instruction and inspiration would insure directly and indirectly to humanity in general might possibly be foreshadowed in the ecstatic flight of a poet's dream or a prophet's imagination, but certainly it cannot be done justice to in the commonplace terms and limitations of such a discourse as this.

A third and, perhaps, equally potent feature in the progress of modern surgery is the creation and growth of the so-called specialities. Notwithstanding the fact that it has been fashionable in certain quarters to sneer at, or even condemn, this more or less artificial division of labor; and notwithstanding the undeniable fact that some rather serious abuses have arisen therefrom, and it has not been an altogether unqualified blessing, still it is impossible to close our eyes to the fact that otherwise unattainable advantages have accrued to surgery by the devotion of certain individuals to more or less clearly marked out segments of the great field; and that such individuals should come to be known as ophthalmologists, gynæcologists and so forth, was no more than natural and proper, provided, always, that they started out in the first place as fully equipped general surgeons.

The ophthalmologist or the gynæcologist who is not a general surgeon is like a sailor whose powers as a navigator are confined to one side only of his ship. In other words, the exclusive specialist, the man who knows practically nothing outside of the narrow artificial limitations of his own specialty is *prima facie* a quack, and for his existence and his foolishness honest scientific specialism should not be held responsible. *Every surgeon need not be a specialist, but every specialist must be a surgeon.*

I don't know that there could be a much better criterion of the progress of surgery in recent years than a fair and impartial study of the authoritative utterances of some generally recognized master of a bygone age in contrast with what we are able to note as to the present state of the art.

For this purpose allow me to call your attention to the address on surgery delivered before the British Medical Association, at its annual meeting in Leamington, in August, 1865, just twenty-seven years ago, by James Syme, the then Professor of Clinical Surgery in the University of Edinburgh. It is but natural for

me to select this address as my text, first, on personal grounds, having had the privilege of enjoying, as a student, an intimate acquaintance with the author; and, secondly, because it is of the nature of a review of the progress of surgery in a given period, viz., forty years, as it appeared to one who deservedly stood in the very front rank among the teachers and apostles of the art and science of surgery during the whole of the epoch covered by the address, one whose doctrines are to-day quoted with respectful consideration at least as frequently as those of any individual who has ever taught surgery, unless, perhaps, with the single exception of John Hunter.

The whole address is characteristic of the man and his life work—plain, direct, uncompromising, earnest and practical—“For he taught them as one having authority and not as the scribes.”

I will try to select a few of the most suggestive points in this address for our present consideration.

Of course the dressing of wounds is one of the most important topics referred to, and in that connection the old method, which consisted of hermetically sealing the edges or cut surfaces of a wound and retaining them in that condition for a certain definite orthodox period of time before changing the dressing, is condemned, the result of this treatment being a total prevention of union by first intention. “To avoid this great evil,” says the writer, “I advised that the edges should not be brought together until the bleeding had ceased, and that there should be no impermeable covering placed over them. The principles which I thus endeavored to establish are now, I believe, generally recognized in practice.”

It was in accordance with the eternal fitness of things that his own son-in-law should have been the one to take up this subject where Syme left it off, and to have worked out all those theoretical and practical details of wound-dressing which are now so universally known and practised under the title of antiseptic and aseptic treatment. Without pausing to discuss the merits of this much debated and somewhat hackneyed subject, from either an abstract or personal point of view, we must all admit that the industry and faithfulness with which it has been worked out,

have brought forth good fruits of a practical character and have certainly entitled their distinguished author to all the credit and honour which has been so abundantly showered upon him by a grateful and appreciative profession.

Moreover, we are in a position to claim for the results of our wound treatment to-day a degree of safety and efficiency, which Mr. Syme would be the first to recognize and applaud if he could have the opportunity of observing it.

In discussing the subject of articular disease, rest by means of the long splint, counter-irritation by means of the actual cautery, and in the advanced cases resection of the articular surfaces, together with general tonics at all stages, comprised the treatment recommended. Thanks to the teaching of American surgeons, under the leadership of Dr. Louis A. Sayre, of New York, we are able to claim a material advance in this department of practical surgery. Rest and extension by weight and pulley—compression and protection—as well as rest by well-fitting plaster of Paris casts, extension splints and braces of various kinds, the free use of tenotomy, early opening and scraping out of all tubercular matter and all other injurious debris from the affected joint with or without removing the osseous surfaces, all these have been added to our resources since Syme's day, and it is worthy of note that the operation of resection of the hip joint, now so successfully practised in suitable cases, does not seem to have ever been taken into consideration by him, or anyone else at that time, at least in Europe.

The operation of subcutaneous treatment of loose cartilages in the knee joint, is mentioned as a safe and easy method of treatment, but with our modern safeguards against septic infection, we don't hesitate to cut right down in any case of the kind, remove the offending body and close up the wound, just as we would do in any other part of the body.

For the arrest of hemorrhage the use of the silk ligature, leaving both ends protruding to furnish drainage, is strongly advocated. Now we use a carefully prepared animal ligature, cut it short, close the wound, apply a comfortable protective dressing and confidently look for union by first intention, and we don't expect to hear from the ligature afterwards.

Referring to the surgery of the head, we meet at once with the matter-of-fact statement that "much has been done in the way of improvement," and the following instances are cited :

1st. An improved method of enucleation of the eye-ball.

2nd. Bowman's operation for fistula lachrymalis.

3rd. Tenotomy for strabismus.

4th. Improved methods of treating nasal polypi.

5th. Tonsillotomy.

6th. Excision of the maxillary bones for tumours.

No mention whatever is made of the operation of trephining. In his book on the principles of surgery, however, we find a description of that operation along with this commentary : "Cases admitting of this operation are extremely rare, and I never knew a successful case of it."

If time permitted us here and now to present the testimony of the ophthalmologist, the otologist, the laryngologist, and last but not least, the brain surgeon of to-day, as to the surgery of the head as a definite field for surgical effort, how marvellous would the contrast appear.

In speaking of the thoracic region the only point considered worthy of mention by Mr. Syme is the diagnosis and treatment of cystic tumours of the mamma. Had resection of one or more ribs for empyema been dreamed of at that time, it certainly would not have been omitted. So that we may fairly reckon that most satisfactory procedure in the long list of solid surgical advances gained within the last quarter of a century.

"Descending to the pelvis" (to use his own words), the following substantial steps are noted :

1st. The treatment of hydrocele by the injection of the tincture of iodine after tapping.

2nd. The treatment of the diseases of the rectum, fistula, fissure, hæmorrhoids and stricture by methods precisely similar to those used now. No mention is made of operations for cancer of the rectum, which are so frequently and successfully performed now-a-days, especially since the method of first removing the coccyx, and if necessary a portion of the sacrum, has been resorted to.

Stone in the bladder and stricture of the urethra are discussed, and in the former the left lateral operation of Cheselden is advocated, and in stricture gradual dilatation and external urethrotomy are recommended as the most suitable methods of treatment, and for my own part I am inclined to believe that these teachings have not been materially improved upon up to the present day, although there is no doubt a certain field of usefulness for urethrotomy.

Speaking of the female pelvis, he says, "the most remarkable change that has taken place in the way of improvement, is in the treatment of vesico vaginal fistula, which was formerly held to be nearly if not altogether incurable, and is now remedied, no less easily than certainly, through means of silver sutures, for the introduction of which we are indebted to Dr. Marion Sims." In contrast with this brief but authoritative utterance of the foremost surgeon of Europe twenty-seven years ago, we have to set the whole science and art of gynaecological surgery with its magnificent record of brilliant discoveries in pathology, and its still more brilliant operative procedures for the relief of suffering and saving of life. Add to this the marvellous fact that there is hardly a single viscus contained in the *abdominal* cavity that has not during these few intervening years been securely placed within the reach of the surgeon's diagnostic and operative power.

To even enumerate the individual operations and other definite and assured gains of this great field of modern surgery would require an expenditure of time which we cannot afford; besides, to such an audience as I have the honour of addressing any such enumeration is superfluous.

It is in regard to the contents of the various cavities of the body, the cranium, the thorax, the abdomen, the pelvis, that the most valuable and the most astounding surgical advances have been made, and I think it is no more than the simple truth to say that neither Syme, nor any single individual of his time, were able in their most hopeful and prophetic moments of surgical aspiration to even conceive of anything approaching such results as have been positively and permanently arrived at.

To my old master it could not, however, fail to be a source of the utmost satisfaction could he but know it, that to some, in fact a goodly number of his own pupils the world is directly and indirectly indebted for a great deal of the success of this great movement in the onward march of surgery.

It would no doubt be an easy matter to illustrate in other ways, and to a much greater extent, the progressive changes which the science and art of surgery have undergone in our day, and it would no doubt be an interesting and profitable exercise to consider in detail the individual steps and the order and manner in which they have been laboriously accomplished, and to call the roll of the leaders who, in many lands, have headed the victorious army in its ceaseless march from victory to victory. But time forbids. I hope and believe, however, that brief, fragmentary, imperfect as this little glance backwards and around us over the field of action has been, that still it may be regarded as sufficient to justify us in appreciating, on the present occasion, the concluding words of the address, of which so free use has been made at this time: "In conclusion, Mr. President and gentlemen, I beg to express my hope that from what has been said, surgery will not appear to have stood still or pursued a retrograde course during the last forty years, but on the contrary to have been improved in many important points of practice and to hold out the prospect of further advance, so that when forty years hence some senior member of the Association shall take a similar retrospect, he will find no lack of materials for illustrating the march of progress."

One more prophetic utterance made at or about the same time by one of Syme's own colleagues (Sir James Y. Simpson), I feel impelled to quote here, although its scope is not limited to the field of surgery, but extends to larger and more indefinite departments, in all of which we, as members of the medical profession, have a strong and direct interest.

"It may be also that the day will yet come when our patients will be asked to breathe or inspire most of their drugs instead of swallowing them, or at least when they will be changed into pleasant beverages instead of disgusting draughts and powders,

boluses and pills. But that day of revolution will not be fully realized till those distant days when physicians—a century or two hence—shall be familiar with the chemistry of most diseases ; when they shall know the exact organic poisons that produce them, with all their exact antidotes and eliminatories ; when they shall look upon the cure of some maladies as simply a series of chemical problems and formulæ ; when they shall melt down all calculi, necrosed bones, etc., chemically, and not remove them by surgical operations ; when the bleeding in amputations and other wounds shall be stemmed, not by septic ligatures or stupid needles, but by the simple application of hæmostatic gases or washes ; when the few wounds then required in surgery shall all be swiftly and immediately healed by the first intention ; when medical men shall be able to stay the ravages of tubercle, blot out fever and inflammation, avert and melt down morbid growths, cure cancer, destroy all morbid organic germs and ferments, annul the deadly influences of malaria and contagions, and by these and various other means markedly lengthen out the average duration of human life ; when our hygienic condition and laws shall have been changed by State legislation, so as to forbid all communicable diseases from being communicated, and remove all causes of sickness that are removable ; when the rapidly increasing length of human life shall begin to fulfill that ancient prophecy, ‘ the child shall die an hundred years old : ’ when there shall have been achieved, too, advances in other walks of life far beyond our present state of progress ; when houses shall be built and many other kinds of work performed by machinery, and not by human hands alone ; when the crops in these islands shall be increased tenfold, and abundance of human food be provided for our increased population by our fields being irrigated by that waste organic refuse of our towns, which we now recklessly run off into our rivers and seas ; when man shall have invented means of calling down rain at will ; when he shall have gained cheaper and better motive power than steam ; when he shall travel from continent to continent by submarine railways, or by flying and ballooning through the air ; and when, to venture on only one illustration more, tiresome

surgical addresses shall be no longer required to be written by long-winded, so-called orators, nor listened to by the long-suffering and uncomplaining members of associations.”

These utterances unquestionably seemed altogether Utopian at the time they were breathed forth by their gifted, far-seeing author, but from what has already been realized in the direction here indicated are we not justified and encouraged to look to the future with the keenest feelings of hope and confidence, as well as to the past with equally lively feelings of pride and gratitude; for who shall presume to say, so far as the march of modern scientific medicine and surgery are concerned, “Thus far shalt thou go, and no further.” For my own part, Mr. President, I have long felt that our profession, as such, has been entirely too modest. Like true worth in general, it has refrained from asserting itself and demanding the power and position justly due it. The irresistible logic and force of facts and circumstances, however, are working many deeply important changes on men and things, and to the watchman on the watchtower nothing is more obviously perceptible among the coming events of the near future than the promotion and elevation of the medical profession to a position of eminence and power which its intrinsic greatness and vital usefulness justly entitles it to.

DISCUSSION.

DR. V. H. MOORE—I have listened, as no doubt you all have, with a very great deal of pleasure and profit to the able exhaustive and eloquent address of Dr. McLean. He has covered the field completely and so perfectly. He has entered almost every cavity, and he told you something about it when he came out, so he has left me very little to say. Although he is not a Canadian now, he was once, and I am proud to say that I listened to his very able lectures on physiology in 1867 and 1868 in the old Limestone city. He has circled the head and entered it, the chest and entered it, the abdomen and pelvis and entered them. He did not neglect the eye nor the ear nor the throat. Now what is left for me to say? He told us of the surgery of forty years ago, and of the surgery of to-day, and he did more than that—pictured out the beautiful new

Jerusalem. To attempt to follow a paper like this is utterly beyond my power. I shall not take up the time of this Association by reiterating what has been so well and ably said; better than I could possibly say it if I had ever so much time for preparation. I shall not take up your time, but let me express the hope that this distinguished gentleman may confer a similar favor upon us on some future occasion.

DR. REEVE—I should like to move a vote of thanks, but that I presume is not in order. I should like to call Dr. MacLean's attention, not in any captious spirit, to a slight lapsus with reference to ophthalmology, which, he said, was unknown 25 years ago. Though I was then a young man, I had been guilty of iridectomy, and extraction of cataract was looked upon as an almost ancient operation.

HON. DR. SULLIVAN—Of course the paper to which we have listened does not admit of discussion, but I rise for the purpose of seconding the resolution to tender a cordial vote of thanks to Dr. MacLean for the very able paper which he has read, a paper which comprises a great deal of research and industry, and has been presented in a most eloquent and able manner. It has been my good fortune to be acquainted with Dr. MacLean for a great many years. I recollect when he first came to Canada, after having imbibed the lessons from the greatest surgeon of the day, of whom he has spoken so affectionately, Dr. Syme of Edinburgh. Like many other young Canadians, Dr. MacLean considered Canada was not large enough for him,—did not afford surgery enough for him—and he went to the United States. There he embarked in his profession, and it is such a satisfaction to us Canadians to know that he is one of a number of our countrymen who have met with success in the neighboring country. We have Osler, whose name I may mention in connection with quite a number of others who have secured leading positions second to none in the neighboring republic. That Dr. MacLean, in the space of a few years, by his own unaided ability and without influence of any kind, should have attained the position that he occupies is, I might almost say, a phenomenon, and I am sure that his Canadian friends rejoice at his success. They hope that the reputation he has attained as a surgeon will continue, because it has not turned his head. Possessing all the attributes of a gentleman,

he has always come to us in Canada laden with the treasures resulting from a varied and extensive practice, and has given us the benefit of them as he has done to day. Therefore, I hope that he will continue to make these visits to the land of his birth, and I am sure that we will always be proud to give him a cordial reception. The paper, as I said before, does not admit of any discussion; it is a paper which has been assuredly a rich treat to me, as it has been to all of us, and I am sure you could not help feeling a glow of pride and satisfaction that this Canadian friend and countryman of ours has been able to attain the exalted position which he occupies in the surgery of the United States. I trust that he will continue in his successful career, and that his fame will constantly increase and widen until we are all still prouder of him if possible than we are at the present time.

DR. DUPUIS—I cannot withhold a few words of congratulation to Dr. MacLean for that able and beautiful address that he has delivered. I have had the pleasure of knowing Dr. MacLean ever since he left the American army, after two years service there, when he first came from Scotland to settle in Kingston. I think the first operation he had there was a case in which a fellow fell off a load of hay and hurt his throat. The doctor performed tracheotomy and saved his life. That was soon after he came to Kingston. From the time of that operation his fame has been widening. People come to him from a long distance to have operations performed. At the time he was in Kingston that city was quite a surgical centre. People used to come there even from Montreal and Ottawa, and all parts of the country, to have Dr. MacLean operate on them, and his fame extended so rapidly and so widely that they heard of him in Ann Arbor. They wanted a professor of surgery in the University there and they sent a polite deputation to ask him to go to Ann Arbor. I had a conversation with him on the subject and I said “by all means go. It gives you a wider field in which you can distinguish yourself.” I was never more pleased than when I saw in the American Journal of Medical Science, in an article reviewing a hundred years of medical surgery, Dr. MacLean’s name spoken of as a leading surgeon of the North Western States. I was greatly pleased with that, and I think he has shown to-day, as all who

are acquainted with his career know, that he is the leading surgeon of the North Western States, and not only as a surgeon, but as an orator and a man of comprehensive mind who can gather the facts of years gone by and put them in pleasing manner before us, thus showing a master hand. While on my feet, I think I can correct a mistake of Dr. Reeves'. Dr. MacLean did not mean to describe the state of ophthalmology twenty-five years ago, but he said that Dr. Syme said it was the state of it forty years before that time—forty years previous to the time Dr. Syme was speaking of.

DR. MACLEAN—What I meant to say was that that was the state of ophthalmology at the time, twenty-five years ago, as it appeared to Dr. Syme.

DR. HINGSTON—I should do violence to my own feelings if I did not accord my meed of praise to Dr. MacLean on his excellent paper, with one exception. His allusion to me was prompted by a feeling of partiality I am sure. Whatever it was, it was but a feeble echo of the feeling of respect and affection that I have entertained for him ever since I had the pleasure of knowing him, and that is many years ago. Dr. MacLean has gone over the whole domain of surgery, and others have tried to follow him but could not. They got into the cavities and got out of them as quickly as they could. Dr. MacLean will perhaps pardon me if I do not quite agree with one small portion of his paper. It is as to the relative advantage of lithotomy and lithotrity in cases of stone in the bladder, and the relative advantages of dilatation and internal division of stricture. Dr. MacLean gives preference to the old classical operation of gradual dilation of the urethra in stricture. I happen to be a few months, perhaps a year or two, older than Dr. MacLean and I taught for twenty-five years precisely the same as Dr. MacLean now teaches, but there came a time, and there will come a time with Dr. MacLean, when I changed my views upon these two questions. Certainly, for the first twenty-three or twenty-four years of my practice I gave the preference to lithotomy for stone in the bladder. Now I do not operate once in ten times in that way when I can perform lithotrity. Then as to the treatment for stricture, it was the old method taught forty years ago, the method I taught in my hospital for twenty-five years. Then came a change in the spirit of my

dream. Until then I thought, as Dr. MacLean does now, that the best method is gradual dilation, but I have been forced to the conclusion—and I tell my students on every occasion that I have changed my views on that question—that the division of stricture gives quicker and more permanent results. It seems almost in bad taste for me to criticize the paper in this way, but I know Dr. MacLean will be pleased to have my views on these points. Surgeons like to have these points brought up. I will join with those gentlemen who proposed the vote of thanks—I will do it with all my heart, and I am delighted that Dr. MacLean has come to us and I hope he will come again soon.

DR. MACLEAN—I am very happy indeed to hear all the kind and complimentary things that have been said. I feel very deeply gratified, especially when these compliments come from old pupils like Dr. Reeves, and old colleagues like Dr. Sullivan and Dr. Dupuis, but I should have been very much disappointed indeed if my observations, as contained in my address, had been allowed to pass without a single word of criticism or opposition. I feel very grateful indeed to my friend Dr. Hingston for having given some little show of opposition. If there is anything in this world that a surgeon—especially one with some Celtic blood in him—enjoys, it is opposition. Perhaps not quite so much as my Hibernian friend, Dr. Sullivan, but even a Scotchman likes a little of that. But to return to the practical point that Dr. Hingston has taken up, the very point on which I expected to find a difference of opinion. I did not in my address wait to give all the reasons for the faith that was in me, because that would have made it too long and tedious, for I do think if there is anything in this world that is a nuisance it is a so called exhaustive address on medical surgery. It is generally more exhausting to the audience than to the subject. I tried to avoid that and made it somewhat dogmatic, but now that Dr. Hingston has raised the question I think it is but fair that I should state why I hold these views. With regard to the operation for stone in the bladder, I have lectured, as Dr. Hingston has done, on surgery for twenty-five years more or less, and during most of that time, as you are aware, I had a large clinic of a peculiar kind—not the ordinary run of surgical cases in a large city, but cases that come from

a very wide area of a vast continent, wherever my old pupils had settled or my old patients lived, or wherever the name of the University of Michigan had been heard of, and in that way I had an opportunity of seeing many curious cases and having many strange experiences, and one of those experiences was the oft returning cases of stone in the bladder where the operation of crushing had been performed often by very eminent and skilful hands. Consider for a moment the condition of the bladder which had a stone in it for some time, the inflamed, irritated, degenerated condition of the membrane. It is a common thing to operate by cystotomy where there is no stone at all. What for? To give the bladder physiological rest. It is an operation I have frequently performed and with great success. One should guard against operating where there is irritation of the coating and then take out the stone and have done with it. Now if we do so in a case where there is no stone in the bladder, how much more so is it necessary where there is a stone. In the operation of lithotomy you not only get rid of the stone, but you give the bladder physiological rest, and an opportunity to rejuvenate itself and to take a fresh start in life, and to return to its primeval condition of a healthy structure. That is the real reason why I prefer the lateral operation to any other method of removing stone from bladder. The suprapubic operation I consider a bad operation; I know I am something of a heretic, but I express my own view. The lateral operation, affording rest, drainage, and an opportunity to recuperate, I consider best. I have performed it often and that is one reason why I am partial to it, because it is only right for a man to praise the bridge that carries him safely across. At the same time, we ought all to be open to conviction, and when Dr. Hingston or any other man can show me good and sufficient reasons, backed up by actual practical facts to change my mind, I shall immediately do so and gladly confess that I have been in error, and set out at once to mend my ways. As to the question of stricture of the urethra I base my opinions there upon a pretty large experience of it, having been associated with Professor Syme, to whom we are really indebted for all that has been done in the matter of stricture. He was the pioneer; he was the man who worked out the pathology of stricture, the man who invented the method

which so simplified the operation and made it safe. He was the man who operated so frequently and successfully as to demonstrate the safety and beauty of that operation. Having been associated with him for so many years, and watching him carefully insinuating instruments through the tortuous and difficult passage of the stricture, and having tried to imitate him in my practice of thirty years or more, on the data obtained that way I have a very firm conviction. I have dilated a great many strictures and got them along so far that I have said to the patient, "now here is a bougie, a good large one, that will slip in. Pass that in every Saturday night and keep quiet until Sunday and you will cure yourself. Those patients have very rarely come back, unless they have been careless and neglected themselves. Of course, where the stricture has become resilient and refractory and refuses to dilate, then the question arises between two or three operations. I hold that the external operation is best. You see what you are doing. I do not like this stabbing in the dark, either moral, mental or physical. I believe you see better what you are doing, you have an open wound, you divide the stricture thoroughly, and above all I believe it gives the best results. I have seen internal urethrotomy performed often, and I have frequently operated on the same cases afterwards on account of recurrence. These are the grounds on which I take this stand. I think in the operation of dilatation, perhaps because it is tedious and the surgeon does not get the patient off his hands quick enough, he is sometimes inclined to slur an operation to avoid it, and then urethrotomy is simple, and the operation is so easily done that it is tempting to a surgeon, and he is apt to overlook its defects. No longer ago than last Sunday morning a gentleman came into my office and said to me, "I will have to have an operation for stricture." I said, "how do you know?" He said, "I have been down to New York and had an examination," and he mentioned the name of a gentleman who is now here, and therefore I will not give his name—he mentioned the name of a gentleman with which we are all familiar. He said, "I have the stricture so tight and so hard and organic that it is perfect nonsense to talk of treating it any other way than by operation." The surgeon told him it would take from four to six weeks and would cost from \$500

to \$1,500." My patient said "I do not want to have it done there, I want you to do it, for when I told the gentleman to examine me I mentioned that I would go back straight home and have Dr. MacLean do it." He said, "all right you could not be in better hands." I said "lie down and I will examine you." I took a full sized bougie; he said, "you cannot use that on me, for all that the doctor in New York could use was a whalebone bougie." I said, "I only want to make an examination." I passed the bougie and found a decided stricture. I finally passed a very small instrument but it was a metal instrument. I then used a larger one. Last Sunday he came to my office and then I passed three or four instruments. He said, "since I have been here I have been able to pass water easily." I have no doubt he will be rid of his stricture without any operation. Now an operation may be more brilliant to the surgeon but it will not be so beneficial to the patient. I have no doubt whatever, so far as that patient is concerned, an operation will be entirely avoided. On the other hand, there is a danger in the opposite direction. I contend, so far as the treatment of stricture is concerned in a vast number of cases, the patient can treat himself and when an external operation is necessary it can be performed. I believe a large number of cases of urethral trouble are subjected to the operation of internal urethrotomy, when there is not the slightest necessity. I tell you it is an operation that is performed too often, and there is great danger of sepsis in a case where there is a little chronic discharge. The patient comes to me and says "I have a chronic discharge and you might as well operate on me first as last, and I want the operation performed." I very rarely do it indeed. I pass bougies for them and treat them that way carefully and persistently and get rid of the trouble. For these reasons, which I have given you, I still contend that treatment by external operation is better. First, by internal operation you may cut too much, you may have hemorrhage and the results are not so promising. I did not give them in my address, but inasmuch as Dr. Hingston has challenged my views, and done it with that grace, dignity and eloquence characteristic of the man, I really could not refrain from saying a few words in response to his criticism.

Dr. HINGSTON—I am obliged to say something; it is merely

to say that if I proposed to join in a vote of thanks to Dr. MacLean a few minutes ago, I do so now with infinitely more satisfaction. The address was admirable, and I think his defence of the two operations is very clever indeed. I shall not discuss it as I think it would take a day, and I have no doubt two-thirds of those present have decided views on the subject. I will merely say in a general way that there are cases and cases of stone in the bladder, and there are strictures and strictures, and I think a man would not be a wise man who would adopt Dr. MacLean's method or my own in every case, and the same with regard to stricture. As to the frequency with which I try it, I am not disposed to operate more than once in five times by lithotomy. Perhaps once in five times, but as I said the question is too large to be discussed here today. I am delighted that I gave Dr. MacLean an opportunity to make those excellent observations.

The vote of thanks was adopted unanimously.

DR. MACLEAN—In returning thanks for this vote I wish to say one word. In the first place, referring to the remark of Dr. Sullivan, I may say that I was born a Canadian, that wherever I live I shall be a Canadian and I shall die a Canadian. In the second place, I wish to say that there is not anywhere in the United States or in any other part of the world a Medical Association or an audience from which I could receive a vote of thanks with greater pleasure or greater gratification than from the Canadian Medical Association.

APPENDICITIS. *

BY DR. H. P. WRIGHT, OTTAWA.

CASE I.—J. M., taken ill on a certain Sunday suddenly with acute abdominal pains, which, notwithstanding warm applications and opium, increased, and that night was diagnosed as *acute appendicitis without tumour*, by the attending physician, Dr. Garrow. As far as I can recollect, a few hours after the first onset of the pain, it became localized in the iliac region, and remained there with the usual objective symptoms of rapid small pulse,—slightly elevated temperature,—anxious facial expression, and constipation till Tuesday morning, when the pain and tenderness became more general, associated with tympanites, and a pinched condition of the features. On Tuesday night I saw him with Doctors Garrow and Henderson, and found marked tympanites, pain and tenderness over both flanks, with deep dullness on percussion, particularly in the right iliac region. Pulse small and wiry, facial expression bad. The diagnosis was acute appendicitis with general peritonitis, and it was decided to operate early on the following morning. Willard Parker's operation was adopted; a curved incision was made over the site of greatest dullness, about an inch above the middle of Porpart's ligament. The division of the deep tissues was followed by a gush of stinking pus. The appendix inflamed, thickened and adherent was tied and removed. Peritoneum was adherent at different points to intestines which, on separation, was found to pocket pus, an accumulation being found even on the opposite side. The abdominal cavity was well washed out with boiled water, a double drainage tube inserted, and the wound packed and brought together. Death occurred in about twelve hours.

Probably in this case perforation occurred on Tuesday, because till Tuesday towards the afternoon there was no tympanites, and the tenderness was even then found to be limited to

* Read at the meeting of the Canadian Medical Association, at Ottawa, September 21st, 1892.

the right iliac region ; in the evening it was marked in the left, and then there were symptoms of collapse.

Guerster says that the “absence of tumour with very acute local and general symptoms represents an extremely grave combination of things, its meaning being a general perforating peritonitis. It would be extremely difficult to save the patient even by the most resolute means.” But before perforation occurred, the case doubtless belonged to the first class, that is, simple appendicitis without tumour, about which we are told that “whenever acute and persistent pain occurs in the iliac region, accompanied by vomiting and retching, the pain being markedly increased by palpation, trouble of the appendix could be confidently diagnosed,” and further on he says, and this is a most important part, “that in view of the impossibility of foretelling whether in a given case, spontaneous evacuation of the contents of the appendix or perforation is to take place ; and in the latter case, whether superficial or deep-seated abscess will develop ; and considering the fact that laparotomy followed by excision of the appendix yields good results if done before perforation occurs, it is safe to follow McBurney’s advice, which recommends removal of the appendix, if the symptoms persist and increase for forty-eight hours.

CASE II.—Railway conductor, aged 32. Was first seen by Dr. Edwards on the third day after onset of acute symptoms, and by me in consultation on the following morning. We found pain and tenderness over the whole iliac region, very little tympanites, slight elevation of temperature, slight dullness on percussion on very deep pressure. We made up our minds to wait for further developments in the absence of other alarming symptoms. In three days, the dullness being well defined, and extending towards the lumbar region, we agreed to operate, and an opening was made directly over the site of the appendix. The adhesions were so firm that it was thought well not even to search for the appendix, and after evacuating a large quantity of stinking pus, it was washed out and drained with a double drainage tube. The case progressed favourably. On the tenth day the drainage tube was removed and at the end of four weeks

the patient was walking about, and shortly after resumed his occupation. This is a good illustration of the type of ileoinguinal acute perityphlitic abscess, by far the most common variety, and when recognized, in the absence of acute symptoms it is often good surgery to wait until the fourth or even the sixth day before operating, so that firm adhesions may take place between the peritoneum, constituting the anterior wall of the abscess, and the adjacent tissues. Entering the abscess is then a simple matter and absolutely unattended by danger. Another case of this type was operated upon by Dr. Powell, but as I was unfortunately unable to be present, I will ask him to give an outline of its history himself.

CASE III.—The next case is one of Dr. Garrow's, on a blacksmith, aged 18. Commenced to complain on Friday, 18th July, 1890, of headache, constipation and malaise, and on the Sunday following vomited. Immediately after had severe abdominal pain, and in a few hours the pain and tenderness were limited to the iliac region. Next day the tenderness was very marked, associated with dullness extending onward towards the lumbar region, and upward, so that it became lost in the liver dullness. I saw him on that day with Drs. Garrow and Henderson, and we agreed to operate in the afternoon. A large quantity of stinking pus was found corresponding with the area of dullness. Owing to adhesions the appendix could not be found. The abscess cavity was washed out and a double drainage tube inserted. Notwithstanding the greatest care, there followed tympanites, and every indication of general peritonitis and impending death till the following Thursday, when he passed a large quantity of flatus, and the following day and several succeeding ones fetid matter and pus. He then progressed satisfactorily till the end of August, and in the early part of September walked as far as Dr. Garrow's office. After that he developed a septic pneumonia, and some time later we opened a large post-hepatic abscess which was probably septicæmic, and possibly due to direct extension from the appendix. He died in a few days after the second operation from exhaustion.

CASE IV.—Dr. Edward's case of a girl of about 15 with ileo-inguinal abscess, operation about the fifth day. There was firm adhesion between the peritoneum and the adjacent tissues. The abscess cavity was entered for that reason with safety, a double drainage tube was used, and the patient, I understand, recovered without a bad symptom.

CASE V.—Dr. Henderson's case—ileo-inguinal. A young man about 24 years of age, clerk in a dry goods store. Shortly after first onset of symptoms, pain was eased by opium and bowels kept open with salines. I saw him on the fourth day, with Drs. Henderson and Garrow, and found unmistakable evidence of tumour, pain on pressure, dullness from the right of the appendix towards the lumbar region about four inches and two and a half inches in width. Pulse rapid and abrupt, temperature 102° and ascending. The temperature being the same on the following day, and the other symptoms unchanged, operation was decided upon. The peritoneum was found healthy. Appendix behind the cæcum, black and distended, with a point of suppuration near the bowel. It was tied with a double silk ligature and removed. Recovery progressed without any undue event.

CASE VI.—A spare, healthy boy of 15 under Dr. Lynch, of Almonte. Was taken ill with abdominal pain on Saturday, 10th October, 1891. Symptoms increased, with indications of localization, and on Tuesday morning, when I first saw him, his facial expression was bad, pulse small and rapid, skin clammy, great tenderness over the iliac region, and dullness on percussion. Gave him a full dose of opium, which produced rest, and in six hours we found the general condition much improved, with local symptoms unchanged. Owing to the seriousness of the constitutional symptoms, immediate operation was decided upon. An incision was made over the site of greatest dullness, one and a half inches to the umbilical side of the anterior superior spinous process. Peritoneum found healthy, and presenting surface of cæcum in the same condition. On passing finger behind the cæcum a lot of stinking puss escaped, and a

further examination found the appendix collapsed, highly congested, and firmly adherent to the posterior wall of the cæcum. Washed out the abscess cavity and inserted a double drainage tube. I felt some little anxiety as the peritoneal cavity was exposed, owing to the peculiar position of the abscess, and on that account drew the edges of the wound well together and ordered perfect quiet, feeling that in a few hours sufficient lymph would be thrown out to protect the peritoneum. The case progressed satisfactorily. At the end of two weeks, the discharge being serous and inoffensive, the tube was withdrawn. Since then, I understand, his progress has been uninterruptedly good. I look upon this last case as one of deep-seated ileo-inguinal abscess, owing to the position of the appendix on the posterior aspect of the cæcum. I have always been opposed to the use of exploratory needles, and this is a case in which such an experiment would have wounded the bowel.

Shortly after the last operation I was asked to see a case with Dr. Lynch, of Almonte, and unfortunately I have lost the notes of his case; for purposes of illustration it will, however, suffice to give an outline of it:—J. R., a boy of about 14, with good family history, and a previously good record, was seized with acute pain and vomiting on a given day. Soon associated with increasing temperature and pulse. Symptoms steadily grew worse, and on the third day I saw him; condition was then fair, pulse small and rapid, temperature 102° . Belly fat, great pain and tenderness over whole of right iliac region, with badly defined dullness on deep pressure. Pain and less tenderness extended over towards the left side. It was considered necessary to operate at once, an incision was made well above the middle of Poupart's ligament, and though the abdominal cavity was entered, no pus exuded. After some time, by careful digital exploration through the wound, the abscess cavity was entered between the pelvis and the bladder on the right side; offensive pus freely escaped, and with it came into the wound a large mass of suppurating omentum. This, after ligating with catgut, I amputated, then washed out the whole cavity with boracic acid and hot water, put in a double drain, and closed the opening. He only lived twenty-four hours, and died of general peritonitis.

Were I called upon to deal with such another case as this, I should make a second opening in the median line to secure thorough drainage and to facilitate the free irrigation as recommended by Mr. T. R. Jones of Manchester. Since November I have had, in my own private practice, four cases of acute appendicitis recovering without operative interference. Though important and interesting, the details of such cases are too familiar to you to permit me to relate them. I will only say that I treated them all with small and repeated doses of calomel, and large doses of sulphate of soda to keep the bowels patent, and occasionally with an opiate to relieve the pain, the dose of the latter being in direct ratio to the amount of suffering. Though in two of these cases the temperature from 100° to $102\frac{1}{2}^{\circ}$ continued for nearly a week, and dullness in percussion and tenderness for the same time, so that every day I was prepared to operate, I never felt that the right time had quite arrived. Slowly the symptoms improved till convalescence was established.

In one, a boy of 9 was taken ill on the 26th of November with great pain in right iliac region. On the 27th the pain increased, and "markedly tender" over McBurney's point so that "he could not bear the slightest pressure." Vomiting set in on the 28th and 29th. In response to the treatment already mentioned he passed, together with an ordinary motion, a *whole* apple core. This was followed by immediate relief and rapid recovery. I will allude to this case later on.

In dealing with this subject, I have put to myself several questions, and have answered them to the best of my ability. I have dealt with my subject in this way for two reasons. First, because I think it enables me to select the most interesting points; and next, because it will, I hope, elicit concise and instructive discussion by the many able and experienced surgeons here to-day. I must begin with that all-important, oft repeated, and yet unanswered question: When shall we operate in appendicitis? All authorities, McKenny, Gunds, Guntin, Pepper, Bridge, Fitz, Jones, Treves and others, agree that when, at the end of 24 hours, there is an evident disposition to extension of

local symptoms and an increase of constitutional disturbance, with or without tumour, *operate*.

When there is tumour the surgeon must be guided by surgical knowledge and surgical sense. If there are no constitutional symptoms it may be wise to wait for five or six days, when the operation is as safe as opening an ordinary abscess. Still, he must always bear in mind the possibility of a rupture into the peritoneum at any moment, with a rapidly succeeding septic general peritonitis.

With a distended, tender appendix, the seat of pus, and associated with all the usual symptoms of septic absorption, I know of no means to diagnosticate it for abscess. If it could be, an early operation would be called for to avoid peritonitis by the removal of the appendix. It seems to me the definition must ever remain more or less comprehensive.

How is the abscess formed? It is generally explained by the more or less gradual oozing of pus from the perforated appendix. As the pus comes into contact with the surrounding serous membrane, adhesive inflammation is at once set up, and the abscess wall is thus formed. If this covers the case, it seems to me the greater number of abscesses would be meso-cœlic in obedience to the law of gravitation, as most patients remain all the time in the dorsal position, yet this we know to be the rarest variety. My impression is that adhesions are formed when the appendix is inflamed, between it and the adjoining tissues, and that when perforation occurs, pus finds its way into the parts offering the least resistance. A free appendix is most likely to empty itself into the cæcum by virtue of its anatomical construction, yet, if the resistance offered be too great, its perforation is most likely to be followed by a general and a fatal peritonitis. This explanation will, I think, to some extent, explain those serious cases we now and again meet, with grave local and constitutional symptoms. When the problem of operation is constantly before us, and yet spontaneous relief is obtained, or rapid collapse occurs, we are led to believe we should have operated earlier.

Can inflammation of the appendix be diagnosed from inflammation of the caput cæci or of the pericæcal structures? I

know of no means by which this can be done. Any of these conditions may exhibit the greatest tenderness on McBurney's point, as in the case already related, where relief was obtained on the fourth day by the passage of a complete apple core. As a rule, of course, there are distinguishing features, but occasionally a satisfactory diagnosis is impossible.

Should the incisions marked out by McBurney and Willard Parker always be adopted? I am inclined now to agree with Mr. Jones, of Manchester, and to enter the abscess on the site of the greatest dullness, particularly if associated with œdema. The greatest argument against this is the difficulty of distinguishing between the dullness of the abscess and that produced by the tonic contraction of the fleshy abdominal and lumbar muscles, when the abscess is, and it often is, directed backwards. I find that even in healthy men, with well developed muscles, the percussion note is *dull* over the extreme right of the iliac region. This point should be borne in mind, as I am certain it has caused serious mistakes in treatment.

Having made the incision and opened the abscess, should we search for the appendix? Even my own limited experience has taught me not to do this. If the appendix is not adherent, and can be easily found, and is distended, inflamed, or perforated, it should be removed. I think all authorities now agree with this opinion and practice. Sloughs often come away after some days.

Should we close the wound? I think this a most important question, and has much to do with the ultimate result. In all the operations I have witnessed or taken part in, the rule has been to allow of room only for the drainage tube. Bryant and Jones recommend the lower half of the incision to remain open, and the whole to be stuffed with iodoform gauze, the latter to be removed on the third day usually, and again packed, and so on till granulation tissue fills it up. I should like very much to hear the opinions of those present relative to this. In the same connection we might include the material used for drainage. I have been in the habit of using a double perforated rubber tube, one arm shorter than the other. This has the possible disadvantage of being rendered useless as a drain by compression in

the event of much tympanitic distension. For that reason many recommend a glass tube, but that may cause ulceration by pressure of the abscess wall, with consequent mischief. Others recommend strips of gauze, and this may be the best means, though I am unable to speak of it from experience.

DISCUSSION.

THE CHAIRMAN—This is certainly a practical paper. I am very much pleased with it and it should be well discussed.

DR. BULKLEY—I suppose no one knows less, theoretically, about this subject than I do, but personally I hope there is nobody knows more about it than I do. My first case occurred some thirty years ago in my own person. That was long before a knowledge of appendicitis and its operation existed, and I merely speak of it, as no mention was made of the mode of perforation that took place in my case, and as far as I have been able to ascertain by reading, it is not mentioned in any of the authorities. I was a boy twelve years old and had the ordinary symptoms known as appendicitis and I was treated by Alonzo Park. It was one of the earliest cases of opium treatment. The amount of laudanum I took in two weeks was about two pints. I had no movement of the bowels at all—poultices were applied to my side and my life was despaired of. They had no mode of operating. At the end of five weeks or thereabout the abscess discharged spontaneously. For a couple of days there was a free discharge of pus which after a time stopped and the fever abated. This is the first time I have mentioned the case. My impression from hearing the discussion to-day is that I should hesitate whether to direct my wife, in case I had a repetition of the disease, to allow my abdomen to be opened or not.

SIR JAMES GRANT—I have been very much interested indeed in the excellent paper of Dr. Wright on the subject of appendicitis, inasmuch as it is one that has attracted the attention of physicians and surgeons during the last few years. Dr. McPhedran and Dr. McBurney, of New York, who have written some admirable articles on the subject, have brought to light many important points in connection with it. I merely wish to bring before you to-day, as I have not had an opportunity of writing up my notes on the subject, a case that I have

now under observation. A gentleman who is in his seventy-eighth year was attacked eight or nine days ago with very acute pains in the neighbourhood of the cæcum. Opiates were administered internally and all the ordinary means tried. I came to the conclusion that it might be, from the symptoms connected with it, a case somewhat unique in its character. I was under the impression that it was a case of acute inflammation in connection with the appendix or the tissues around it. I treated him in that way for I had attended him many years before for attacks of rheumatic gout, which generally ended in laying him up for weeks at a time. Had it been otherwise, I should have been inclined to follow the system of those who advocate early operation. I prescribed energetic dry cupping over the appendix. I informed my patient that I believed it was not at all unlikely that he would develop an attack of gout in his extremities, as had been the case years before. On the eighth day, after the abdominal trouble had almost disappeared, he had a moderately acute attack of gout in his feet and knees. I mention this case to show how little we know about the appendix. Some years ago I had occasion to write an article on the appendix which was taken up later by Dr. Howard of Montreal. Since that time the treatment of appendicitis is by operation. Now the abdominal cavity is regarded as a kind of gymnasium, and men think nothing of opening it to see what is the matter. Not many years ago I have seen cases in which, if operated upon by physicians as well informed in surgery as medical men are now, might have benefitted by the operation. In fact, I saw a case with Dr. Wright many years ago, in which I was called in for a consultation. There was an elongated appendix. It tied the bowel up and made a regular stricture. We had a post-mortem afterwards, and we found that if we had used the knife the child might have been alive to-day, but at the same time there is no subject in the whole domain of surgery that a man requires to use more judgment or discretion about than this one of sudden operative interference. I have time and again met cases of ordinary appendicitis that have recovered under ordinary treatment, and others where they have dropped off when an operation might have saved their lives. I mentioned this case to-day, where an acute attack of appendicitis was followed by an at

tack of gout, to show how peculiar this appendix is, and it might be attacked by something of an acute character and afterwards assume a different form and leave the individual. We are living in an age of great progress, more particularly in the domain of surgery. We see what is being done, and those who keep in advance of the medical profession have reason to be proud of the great strides it is making in this nineteenth century.

DR. HILL, Ottawa—Is there a gentleman here who can give us any information as to the physiological use of the appendix? Also, I would like to ask Sir James Grant whether, in ninety-nine cases out of a hundred, he would be enabled to apply the dry cupping over the attacked region? My private opinion is that it could not be used in one case out of a hundred.

DR. MACLEAN—I listened with very great pleasure and interest to the practical and suggestive paper of Dr. Wright, and if it were in my power to add anything in the way of definiteness or certainty to the problems which he has so ingeniously suggested, I should be very happy indeed, but I do not think that I am in a position to do so. I do not think that any person is as yet. After all, the operations in cases of appendicitis are of very recent origin, and I think it will be some time before we are able to lay down a complete set of rules for our guidance in those cases, they vary so much from each other. I think there is one point with regard to the management of appendicitis; we must take into consideration each individual case and judge of it on its own merits. We cannot lay down a general law that will apply to every case. Patients vary as to their age, and to their habits, as to their general condition, and in so many ways that while in one case it would be very easy to decide what course to pursue, in other cases it is a matter of the most extreme difficulty and the greatest responsibility. I may illustrate by one or two cases which have occurred to me quite recently. One was a case of a very well-known young gentleman in the city of Detroit, a man occupying a prominent position there, a gentleman whom I have known for twenty years at least, and who has always been very delicate—a kind of constitution that a surgeon would be very unlikely to select, if he could arrange the matter beforehand, as a subject of operation. This gentleman was in the

woods when he was taken ill with all the characteristics of appendicitis. He got a special train and was brought home as soon as possible, and I saw him perhaps forty-eight hours after the commencement of the symptoms. He was then suffering very much pain and had a good deal of fever—about 101—a rapid pulse, very furred tongue, very sallow complexion, and altogether it looked as if it would take very little indeed to turn the scale against him. The indications for operation were clear, except in so far as there was no fluctuation. That would have settled the matter of course. There were tenderness and swelling and all the characteristics. No doubt, if it had been an ordinary case brought to the public clinic or hospital, there would have been very little hesitation about performing an operation. But in this case, in view of the responsibility connected with it in many ways, and in view especially of the patient's condition, I did hesitate, and I made up my mind that I would wait anyway for twenty-four hours longer, getting everything ready in the house to operate, providing the temperature went up or other indications seemed to require it. I watched him very carefully indeed. In twenty-four hours his temperature had begun to go down. The swelling at the appendix had begun to disappear to some extent. His general condition was better, the expression of his countenance improved, and I felt still further encouraged to wait. I did so, watching him very carefully, until the symptoms gradually disappeared and he got well without an operation. Now there is one of those cases that illustrate the difficulty in deciding as to the operation. I have no doubt at all that if ten operating surgeons had seen that patient, eight at the very least would have determined upon an operation, and yet the patient made a good recovery without it. A very few days afterwards I was called into the country to see a young man, aged 22, who had violent symptoms of appendicitis and had been suffering for several days. I was called for the purpose of operating, as the surgeon in attendance was confident that nothing but an operation would save the patient's life. Sure enough I found him with a high temperature with well marked swelling, and I believed I could detect fluctuation. At all events, the general symptoms were so urgent that the case did not seem to me to admit of any doubt

whatever as to an operation, and I, with very great facility, found the appendix imbedded in a large cavity of exceedingly fetid pus. I removed the appendix, washed out the cavity very thoroughly indeed, and left the cavity open with absorbent gauze so arranged as to make a good drain, and the patient recovered without any bad symptom. These are two characteristic cases illustrating the position that a surgeon very often finds himself in with regard to appendicitis—the question as to operation of the one case had gone so far—the last one I have described—that any doubt about it had really vanished. A few days before, it might have been much more difficult to determine, although, no doubt the patient would have had a better chance. There is one point that I notice in Dr. Wright's paper—the question of the kind of drain to use. I have tried all kinds and have settled down at last to gauze. I believe idoform gauze makes the surest drain so long as the cavity is not too full to obstruct discharge. Just a few days ago I operated for a case of appendicitis which also elicited another point brought out in Dr. Wright's paper. All the symptoms of a rapid case of appendicitis were there and I was called in for the purpose of operating. I operated on the patient within five minutes from the time I first saw him. The case had gone so far that the patient had been delirious, although the temperature was normal. One cannot always trust the thermometer. There was a patient in an abdominal stage of appendicitis, and yet his temperature was normal. Still his pulse was bad and he had a low form of delirium. There was a discharge of a large quantity of pus. I washed out the cavity and drained it well and the patient made a very rapid recovery. The point I wish to make is especially this, that I never saw the appendix. I passed my finger in and I found that the abscess which was caused by the appendicitis was fenced off from the peritoneal cavity, so I operated without touching the cavity, and I thought I should repress my desire for an additional specimen for my collection, and resist any tendency to look further for the appendix. He made a good recovery—as good as I have ever seen, and I do not suppose I shall ever have any further trouble with him. I do not think it is always necessary to find the appendix or remove it. There is one other point with

regard to those cases—it is one of the most unfavorable and unpleasant to contemplate. I can illustrate it by a characteristic case which occurred in my own practice about a year ago. A young lady had recurrent attacks of pain in the region of the appendix. I had been called in once before, but the attack had passed off and she was well, though she had a delicate constitution. Another attack took place and I was called in. The symptoms continued and became aggravated, although there was no very definite swelling. There was a high temperature, rapid pulse, pain, and general constitutional disturbance. In that case it was thought necessary to operate and I did so. In that case we got down to the appendix with the utmost facility and found it swollen, inflamed and adhering. I separated it, very gently of course. I do not think the whole operation lasted over five minutes. I closed it up and congratulated myself on having struck a very satisfactory and easy case. She was a young lady of about 17 years of age. Unfortunately she never did any good after the operation. She woke up in agony and all the symptoms of collapse came on with tremendous rapidity, and in twelve hours she was dead. Unfortunately, I could not have a post mortem. Strange to say, on the same day in New York, Dr. Bell of that city performed an exactly similar operation on a young lady of exactly the same age and with exactly the same result. He could get no post mortem either. Now, perhaps on the other side of the abdominal cavities there was a secondary accumulation of pus which was not detected, and if I find myself in a similar case hereafter, I think I should make a careful exploration. If I did not find the pus which we had reason to believe existed somewhere, I should not have been satisfied with merely removing the appendix, which was done in this case with very great facility, but I should have had a suspicion that there was something more and try to find it. I think it is quite possible that in that case we might have found in the pelvis or somewhere a collection of pus which, if it had been removed, might have had the effect of saving the girl's life. Another point and I will have done. It is a very nice subject and once you get a surgeon started on it it is hard to stop him. It is a subject on which the surgeon is mostly always wound up. One other point I want to make here, and

that is the danger of the exploring needle or aspirator. I think we might almost say now that the aspirator has outlived its usefulness. I know very few cases in abdominal surgery where the aspirator is required. I have seen very sad cases indeed, where great injury has been done by it. First by the injury it involves; second, by sepsis, and thirdly by the incomplete diagnosis. There may be cases where you may empty an abscess by the aspirator successfully, but they are exceedingly rare. They generally leave enough behind to insure further trouble. At all events, as far as appendicitis is concerned, it is a paltering, palliative and ineffectual mode of dealing with it. Either do one of two things—trust to nature and general treatment, or explore the abdomen and make a thorough, complete and scientific operation.

DR. HILL—This interesting discussion has opened my memory, and I recollect a case that I was attending at Brighton, in England, years ago, of a young lady who was suffering from appendicitis, and after a certain time palliatives were used without effect. There was constipation and that was overcome, and she voided no less than eight plum stones, not having eaten plum jam for eight weeks previously.

TREATMENT OF ABORTION.*

By K. N. FENWICK, M.A., M.D.

Perhaps there is no case in practice which gives the physician more anxiety and worry than one of abortion. This is largely due to the diversity of opinion as to its proper treatment, some text books and teachers recommending conservative methods and a plan of waiting and non-interference, while others, including recent writers, insist on the immediate removal of the secundines after the expulsion of the ovum.

Thus Tarnier, who is an advocate of the former method, mentions a case, which is probably a typical result of such treatment as follows:—"During the first five days the patient did very well, but on the sixth I thought I detected a slight odour in the lochia, and at three o'clock in the afternoon a violent chill came on which lasted an hour. This unfortunate

* Read at the meeting of the Canadian Medical Association, at Ottawa, September 21st, 1892.

lady died on the tenth day. At the post-mortem examination we found the uterine tissues softened and its cavity filled by the putrified and still adherent placenta."

Galobin says, "If the fetus has escaped and the placenta or incipient placenta remains behind it is of the greatest importance to effect an early and complete evacuation of the uterus. Though this principle is generally accepted by all good authorities it is not universally carried out in practice."

The expectant plan is very unsafe, for if we wait till dangerous symptoms set in it may be too late, the patient may either die from loss of blood, or suffer severely from subsequent anemia, or if she escape this fate she may die of septicæmia, and failing this she may suffer from the effects of inflammation or subinvolution of the uterus, and we all know how many chronic uterine diseases can be traced to a neglected abortion.

Let us look for a moment at the nature of abortion and we see that it is not a physiological process like labor, but an arrest of development and a premature separation of the uterine contents during the first three months of pregnancy, accompanied by tearing and laceration of the connection between the ovum and uterus. This does not always occur in the same way; thus at an early period the ovum may come away entire, including the decidua vera, and leave the uterine surface raw; it may leave the decidua vera behind; later on it may leave the amnion and chorion; and lastly at the end of the third month it may leave the placenta behind.

The contents of the uterus after an abortion being so different, and the size of the uterus varying with those conditions, it will not always be possible to remove them with the finger as we are advised, and so we must in a very large proportion of cases use the curette.

The plan usually devised is to wait even for days, with or without antiseptic precautions, such as vaginal injections of bichloride or carbolic solution. Then should hemorrhage occur it is treated by hot water or the tampon, and should the lochia smell, by antiseptic vaginal or intrauterine injections, and failing with these, the odor persisting and the temperature rising, by a recourse to the curette.

Let us now look at what seems to me a more rational method, and first of all we should consider if it is possible to pre-

vent the abortion. This will depend on the amount of hemorrhage, the severity of the pain, and the degree of dilatation of the cervix. If either of these symptoms are well marked it will be unsafe to predict the arrest of the process, and if all are present, the ovum is sure to come away.

The first thing is rest, rest of body, mind, and nervous system. The patient must be kept in the recumbent position in bed; the room should be darkened, the attendants quiet, and a full dose of opium administered by the mouth or rectum. Dr. Thomas illustrates this point very impressively by an incident which occurred in his own experience when house surgeon of a New York hospital. The late Dr. Marshall Hall was on a visit, and after criticising the treatment of convulsions by revulsives he remarked,—“Young men let me tell you of an experience of my own. Not long since in London I procured two puppies of equal size and appearance and poisoned them with large doses of strychnia. One of them I treated by keeping it in the light and making counter irritation upon the surface of the body by friction, etc. This puppy died. The other I put down in a deep cellar which was perfectly dark and absolutely quiet, and left him without any treatment. The result was that this second puppy got well.”

Should there be a history of previous abortions one should try to find the cause and treat it accordingly. Thus seek for a history of syphilis, cardiac incompetency, retroversion, endometritis, lacerated cervix, etc. If due to fatty degeneration of the placenta the patient should be given Potassic chloride gr. x three times a day. This treatment was first suggested by Sir Jas. Simpson who was induced to use it from some experiments of Davy and Stephens who found that an alkaline salt coming in contact with the blood rendered it of an arterial red color, so he thought that as potassic chloride contained so much oxygen the blood would be better oxygenated and so the fœtus better nourished.

Should no cause be found for the repeated abortions, we have a valuable remedy in *Viburnum Prunifolium*, first known as a popular remedy among the slaves of the South, recommended by Phares in 1866, and subsequently brought forward to the notice of the profession by Dr. Jenks. I have found it of great benefit myself in these cases and have a patient just now under

its influence. who told me only a week ago that her last child's life was due to this medicine and that she would'nt like to be without it in the house during her pregnancy.

If the abortion is inevitable one must not give any more opium, but should endeavour to empty the uterus as soon as possible, believing that the patient is never safe until this is accomplished.

Opium now will prevent the uterine contractions we require to empty the uterus, while ergot is entirely contra-indicated in abortion, as it causes spasmodic contraction of the os as well as the fundus and so tends to retain the secundines.

The most urgent symptom, hemorrhage, is arrested by the tampon. This can only be done properly with a speculum and should be carefully applied to the posterior and anterior fornices of the vagina and then fill up the canal as the speculum is removed, the material being wads of absorbent cotton soaked in carbolic solution and squeezed out, or boiled cotton. If these are not at hand, clean strips of rag or bandage may be soaked in disinfectant solution and used in the same way, but sponges and sponge tents should never be used; the latter are relics of barbarism.

The tampon should be left in for twelve hours, and on its removal the contents of the uterus are usually found in the vagina. If the ovum has not come away, but the os is dilated, we should be careful not to rupture the sac unless prepared to remove everything, for such cases if now allowed to go on are not accompanied by much hemorrhage and nature will soon finish them satisfactorily. If the ovum has come away but the secundines still remain they should be at once removed, and we must not wait till septic symptoms set in. We are advised to use the finger, but this can only be done if the uterus is enlarged as it would be towards the end of the third month, and even then the internal os is usually so contracted that the finger cannot be got past it. The patient should be prepared as for an operation, the bladder emptied by catheter. She should be placed on left side in Sims' position, the vulva and vagina thoroughly washed, cleansed, and disinfected with warm bicloride solution (1-3000), the perineum retracted by Sims' speculum, if the os is not sufficiently dilated use Goodell's

dilator, steadying the uterus by a hand outside on the abdomen, and grasping the posterior lip of the cervix with a volsellum, the contents of the uterus are removed with a sharp curette or Simons' spoon, or by placenta forceps. The uterine cavity is then flushed out with warm bichloride solution (1-5000) by means of a Bozemans' tube, and then with hot water to prevent any chance of mercurial absorption.

Should the contents have been putrid the uterine cavity should be packed with iodoform gauze which may be left for 24 hours, and then removed, subsequently using vaginal disinfectants.

Dühen has recently published 150 cases where this treatment has been carried out with only two deaths and neither of these were due to the treatment.

My own common sense and experience lead me to believe that this is the only correct method of conducting these cases.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

SURGICAL CASES UNDER THE CARE OF DR. SHEPHERD.

(Reported by Dr. C. F. Martin, House Surgeon.)

CASE I.—*Ovariectomy four weeks after Confinement ; Recovery.*

Mrs. G., aged 26, was admitted to hospital May 27th, 1892, complaining of painful enlargement of abdomen. After last (her second) confinement, four weeks ago, she noticed that the normal decrease in size of abdomen did not occur. The child had been born at full term, and the patient becoming alarmed at her abnormal condition after two weeks, consulted a doctor, who, by tapping, removed two quarts of dark-brown syrupy fluid, and again, three days later, another quart. Since that time no noticeable change was evident, and patient entered hospital in less than four weeks from confinement with distinct evidences of a large ovarian tumour. Nothing in the personal or family history otherwise bear on the case.

June 1st.—After the usual preliminaries, patient was etherized and Dr. Shepherd made an incision $2\frac{1}{2}$ inches long in the

median line from the umbilicus. The peritoneum being cut through the tumour sac was at once reached ; this being properly grasped with forceps in two places, a trocar was plunged in and several quarts of thick grumous fluid removed. An effort was next made to extricate the tumour, but this was found to be closely adherent on all sides to the various peritoneal surfaces surrounding it, and was therefore with difficulty removed. The firmest adhesions existed about the bladder wall, from which the tumour was separated only after much trouble. After rapidly separating the numerous adhesions from above and below, the pedicle was duly reached and tied off with several silk ligatures, and the tumour cut away. The parts were well irrigated with boiled water (110°), and numerous bleeding points were found where old adhesions had existed. Of these, some were controlled by ligature and forcipressure, while over the posterior surface of the bladder and other points of the peritoneum the thermo-cautery was found necessary to control the hemorrhage. The wound was next sutured with silkworm gut and a glass drainage tube inserted, resting in Douglas' pouch. The usual dressings were applied.

Patient recovered from the operation without any untoward symptom whatever, and no complication interfered with the further progress of the case. The drain was removed on the fifth day and the stitches on the seventh, good union being found all along the line of incision. On the eighteenth day patient was sitting up in a chair, and on the twenty-third day left hospital to return home.

CASE II.—*Inguinal Colotomy for old Syphilitic Stricture of Rectum ; Maydl's Operation modified by Réclus.*

Mdme. D., aged 38, entered hospital July —, 1892, complaining of painful and difficult defæcation, blood and mucus in stools, and general debility. Present illness originated about fifteen years ago, after birth of patient's second child, when her perineum was completely torn across. A prolapsus recti followed, and in 1888 patient was operated on for that complaint, and has ever since been troubled with pain and progressively in-

creasing difficulty in defæcation. Since about the same period patient observed blood and greenish-yellow discharge constantly mixed with the stools, a condition which has of late been much worse. For the past two months patient had come to the hospital where gradual dilatation by rectal bougies had been practised twice weekly, but this being very ineffectual, patient sought admission for more radical treatment.

Personal History.—French-Canadian; married twice. By her first husband, whom she married at 15 years of age, she had two children, the first dying of specific disease, the other now alive and well. Her husband, who died about seven years ago, gave a definite history of syphilis, contracted a short time before marriage. Patient was married for the second time about two years ago, but has had no other children. Family history negative.

General condition on entrance.—Pale and weakly-looking, though in fair state of nutrition. Apart from her present complaint, there is no evidence of any organic disease. The rectum, on examination under ether, showed extensive ulceration, chiefly on the posterior surface as far up as the finger could reach, nor could the limit of the ulceration be seen with the aid of a speculum. In places the diseased portions seemed nodular, not unlike cancer, though the ulceration from general symptoms and history was undoubtedly syphilitic in origin.

July 27.—Dr. Shepherd decided to perform inguinal colotomy, and after the usual preliminaries ether was administered and an incision about $1\frac{1}{2}$ inches long made a little internal to the anterior superior left iliac spine. The skin, subcutaneous tissue and peritoneum being cut through, the large bowel was readily found and hooked up through the wound; a glass rod was next inserted underneath it, through the meso-colon, in order to maintain it *in situ*. The patient's bowels, which had been well emptied for some days before operation, gave no trouble. The usual aseptic dressings were applied.

On August 1st (*i.e.*, 6th day from operation), patient was again taken to the operating-room, and the dressings being removed, the bowel was found firmly adherent to the edges of the wound and the general condition of the patient excellent. The

thermo-cautery was now alone used, in order to cut through the bowel transversely, only half the circumference of the bowel was opened and the fæces allowed to escape. Carbolic oil on lint with dry aseptic dressings were applied.

Aug. 3.—Operation was completed to-day, and, as before, the thermo-cautery was alone employed, the bowel being thus completely divided and the glass rod lifted out. Carbolic oil on lint was inserted between the divided ends of the bowel and dressings with jute-pad applied. No anæsthetic was employed for the completion of the operation, nor did patient experience any appreciable amount of pain while the cautery was being used.

Aug. 15.—Dressings have been changed twice daily, and patient has progressed rapidly and favourably from the outset. Wound has entirely healed, except for a few healthy granulations at its lower end. Patient sat up in a chair to-day and wheeled herself around the ward.

Aug. 21.—Walked about the ward, feeling in excellent condition.

Aug. 27.—Wound quite healed; patient has been walking about daily, and left the hospital in far better health than on admission.

Remarks.—This is certainly the colotomy of the future; its simplicity, safety, and the rapidity and ease with which it can be performed is certainly marvellous to one accustomed to the old lumbar colotomy. Maydl recommended suturing the bowel to the abdominal wall and also the mesenteric surfaces of the knuckle of bowel extruded. This was not found necessary by Réclus, who merely passed a glass rod through the meso-colon and thus kept the bowel in place. He used the thermo-cautery to open the bowel on the third or fourth day, and, later, excised the remainder of the protruding bowel; but this is not necessary. Cutting through the whole bowel so as to be able to lift out the glass rod is all the operation required, the cut ends afterwards retracting.

CASE III.—*Compound Fracture of Skull with Loss of Brain Substance; Removal of depressed bone; Recovery.*

M. R., aged 6 years, was brought to hospital in the ambulance,

having been thrown from a carriage head first down an open man-hole. Examination showed a long ragged wound over left eye, extending upwards and outwards over left frontal region for about $3\frac{1}{2}$ inches, beginning just above the external angular process. There was much loss of tissue and several pieces of bone depressed into the brain. The wound was filled with dirt from the drain, and small fragments of brain tissue were seen oozing from the wound. The child was in an irritable condition, but quite conscious; pupils neither markedly contracted or dilated, reacted to light, and no paralysis of any kind; speech was not interfered with.

The child was anaesthetized at once, hair removed, and parts well cleansed with soap and antiseptic solutions. Three pieces of bone which were driven into the brain substance were then removed, two being about $1\frac{1}{4}$ in. \times $\frac{3}{4}$ in. irregularly square, while the third was somewhat smaller. There was free bleeding from the brain. The upper part of the temporal bone, which had been depressed, was elevated and left in place, and the dura mater sutured in three places with iron-dyed silk. The skin wound was next prolonged backwards for about two inches to relieve tension on the external sutures, and the scalp was then closed over, a catgut drain inserted, and part dressed with iodoform, protective, and usual dressings. Patient slept well during the night; temperature rose next day to $100\frac{1}{2}^{\circ}$, but by midnight was normal, remaining so throughout the whole period of convalescence.

On the third day after operation the drain was removed, the wound looking very healthy, and union by first intention having occurred. On the ninth day, again dressed and stitches removed, the wound being well closed up; pulsation was distinctly visible where the bones had been removed, but no signs existed of excessive tension. About a week later patient commenced walking about the ward, and on the nineteenth day since operation left the hospital, there being no signs of complication. Throughout the whole course of treatment patient experienced no pain whatever, not the slightest evidence of disturbance of cerebral functions nor of impairment of general health, while from the second day the temperature remained constantly normal.

Patient returned to hospital two weeks later, having shown no untoward symptom of any kind and being apparently in excellent health. Pulsation was still marked over site of wound.

Remarks.—The result in this case was most satisfactory. The injury of brain substance involved the second left frontal convolution, the centre of articulate language fortunately escaping. When last seen (September, 1892), the child was in perfect health, and only a small pulsating spot could be felt in left fronto-temporal region.

Reviews and Notices of Books.

A Handbook of Hygiene and Sanitary Science.
By GEORGE WILSON, M.A., M.D., F.R.S. Edin., D.P.H.
Camb. Seventh edition. London: J. & A. Churchill.

This has long been one of the favourite handbooks on hygiene, and the best evidence of its popularity exists in the fact that it has now reached the seventh edition. The general plan of this edition remains as before, although many of the subjects have been rewritten and brought up to date. We notice a new chapter on Meteorology, and the chapter on Vital Statistics has been considerably enforced. One of the most interesting chapters of all is that on Communicable Diseases. A brief, but useful, account of sanitary law, and a summary of the duties of health officers and sanitary inspectors complete this very serviceable book.

A Text-Book of Morbid Histology for Students and Practitioners. By RUBERT BOYCE, M.B., M.R.C.S., Assistant Professor of Pathology in University College, London. With 130 coloured illustrations. London; H. K. Lewis, 136 Gower street. 1892.

This is a volume full of interest, and is in striking contrast to the many prosy works on this important subject. The author has succeeded in giving the important facts without discussing vague theories and leaving you in any way to guess at the true meaning. The classification of morbid processes and arrange-

ment of the same show originality and comprehensiveness, while the suggestions thrown out will do much to stimulate research work. The chapters on Inflammation and on Diseases of the Kidney and Lung are among the best on these important subjects, and those not familiar with the latest views will find here the facts up to date. The illustrations, mostly micro-photographs, are not well reproduced, the outlines being indefinite and the fine distinctions not brought out. Both author and publisher are to be congratulated on this very readable and useful publication.

Medical Microscopy. A Guide to the use of the Microscope in Medical Practice. By F. J. WETHERED, M.D. (Lond.), Member of the Royal College of Physicians; Medical Registrar to the Middlesex Hospital and Demonstrator of Practical Medicine to the Middlesex Hospital Medical School; Late Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park. With illustrations. London: H. K. Lewis, 136 Gower street.

This publication cannot be said to contain anything that is new, but it is readable and concise, and though not exhaustive, still students and busy practitioners will find much that is useful and nothing confusing. The great advances made from year to year both in description and technique necessitate the appearance of such books as this one. The edition is nicely bound and well printed, and may be kept on the table with the microscope with a good deal of profit.

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Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Annual Meeting, October 14th, 1892.

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

The annual meeting for the session 1892-93 was held in the rooms of the Society, 14 Phillips Square, on the above date. There were present Drs. F. W. Campbell, A. Laphorn Smith, Lachapelle, J. C. Cameron, Alloway, James Bell, J. A. Macdonald, A. D. Blackader, Shepherd, Guerin, Gurd, G. T. Ross, Wesley Mills, Reed, J. J. Gardner, James Stewart, Lafleur, E. H. Blackader, Kirkpatrick, Springle, Williams, G. G. Campbell, E. A. McGannon, McCarthy, Foley, Shanks, Thompson, Vipond, Bruère, McBain, J. Elsdale Molson, Evans, Hamilton, and Kenneth Cameron.

After the minutes of the preceding regular meeting had been read and confirmed, Dr. C. W. Wilson, Dr. A. G. Morphy, Dr. D. J. Evans, and Dr. R. K. Pattee of Vankleek Hill, were elected ordinary members of the Society.

A Case of Pyelo-nephrosis simulating Psoas Abscess.—DR. E. A. MCGANNON, Brockville, read the following report and exhibited the specimens :

W. B., aged 34, bookkeeper. About five years ago, in the course of an examination for life insurance, a small amount of albumen was discovered in his urine. The microscope showed pus cells, but no casts. A second examination at an interval of a week gave the same results. The pus was thought to arise from the bladder, and under a bland diet and the use of Lithiated Hydrangea for several weeks the albumen entirely disappeared from the urine. At this time he had no symptoms, and expressed himself as feeling perfectly well. He continued to obtain good health until two and a half years ago, when I was called to see him, and found him suffering with pain in his right side, which extended down into the groin and right testicle. The pain was constant and kept increasing in severity ; soon the right thigh

became drawn up; later, signs of an abscess were found in the right groin, it pointing first above, and later, below Poupart's ligament. Not being able to satisfy myself that I had a psoas abscess to deal with, and wishing to give the patient and his friends the benefit of other advice, Dr. Bell of Montreal was called in consultation. He gave it as his opinion that we had a psoas abscess to deal with. It was accordingly incised, pus evacuated, and a long drainage inserted. Pus continued to drain through this tube, the patient gradually getting stronger until he was able to resume work; and at the end of a year or more was in good health, except for the annoyance of the tube, which he continued to wear. Last spring he began to have swollen legs and feet. On examining the urine, it showed about 50 per cent. albumen and (microscopically) pus cells and casts. He then suffered severely with irritative dyspepsia. Since that time he has had several attacks of acute nephritis, followed by general dropsy. During the last attack, acute pleuritic and pericardial effusion supervening, death took place in less than twenty-four hours. A partial autopsy only was allowed. The abdomen was opened, and on following up the sinus from its opening in the right groin, it was found to pass beneath the sheath of the psoas muscle, terminating on the posterior surface of the right kidney. The walls of the tract were firm and smooth, and at no place did it communicate with carious bone. On removing the right kidney it was found to be small and surrounded by a mass of firm adhesions, which could be broken down only with great difficulty. The left kidney was large and easily enucleated. Bladder normal; vertebræ and intervertebral discs normal. The right kidney was small and firm; the capsule was much thickened and firmly adherent. On the posterior surface was a small sinus leading down to the pelvis of the kidney. On section, the kidney substance was found to be destroyed, its place being taken by firm fibrous tissue. The pelvis was found filled with pus, and in its sacculations small calcareous particles were found. The right ureter was much thickened. The left kidney was much enlarged and congested, the capsule easily removed. On section, the cortex was seen to be thickened and its blood-vessels engorged.

DR. BELL said that when he saw the patient with Dr. McGannon there was an abscess pointing in the iliac fossa which presented all the appearances of a psoas abscess. He was surprised to hear of the result of the autopsy.

DR. SHEPHERD mentioned a case of empyema which, at the autopsy, was found to be due to a nephritic abscess bursting into the pleural cavity. The case will be reported in full at a later date.

Scirrhus of the Breast.—DR. LAFLEUR exhibited a breast removed by Dr. Bell, from which the nipple had entirely disappeared, its place being taken by a large ulcer, one inch in diameter, with pigmented raised edges and a yellow firm base three-quarters of an inch below the surface. On section it was seen that very little of the gland tissue was left, its place being taken by a new growth of a light pinkish colour, which was easily scraped with a knife, but at the edges it was almost cartilaginous; there were some glands in the axilla enlarged. Histologically it is an ordinary scirrhus, plentiful stroma, with cells of an epithelial type in the alveoli. The peculiarity of the case is the predominance of the ulceration over the new growth, which condition is rather uncommon.

DR. BELL said that the patient from whom the breast had been removed was 64 years of age. She was not very intelligent, so a satisfactory history could not be obtained. Three years ago a small sore appeared at the edge of the nipple; two months ago it became as large as the end of the finger, when it turned black and sore, apparently a gangrenous process; no caustics had been used.

Two Cases of Septic Peritonitis.—DR. LAFLEUR exhibited the intestine from a man who had died of a septic peritonitis, set up by the perforation of a typhoid ulcer. Clinically the case was one of the ambulatory type, the man had been ailing for about a month. The ulceration was of about three weeks standing, and was not very extensive, the ulcers being few in number, small and scattered, none being confluent, most of them had cleared off, but some still had the slough adherent. About two feet from the ileo-cæcal valve there were some recent

patches, with swelling of the whole or portion of the Peyer's patches. The perforation was situated two and a half inches above the valve, ulceration had taken place down to the serous coat, and the perforation was a tear one millimetre broad and three long, extending in the longitudinal axis of the bowel, which is rather uncommon. There are three varieties of perforation—the pin-hole perforations, the linear slit in the floor of the ulcer, often due to the tearing of the œdematous coat of the bowel during active peristalsis. He (Dr. Lafleur) had never seen a case in which the whole floor of the ulcer gives way as described by some authors.

The second specimen was from a case of septic peritonitis due to a sloughing appendix. The abdomen was distended and exhibited a fibro-purulent peritonitis, the whole visible cavity was filled up with coils of small intestines much distended. There had been no escape of intestinal contents, so it was a case of purely septic peritonitis. The character of the peritonitis varies with whether there are fæces in the peritoneal cavity or not. When a perforation of a typhoid ulcer occurs, it not infrequently happens that the patient dies from collapse before any very marked inflammatory action takes place in the peritoneum. The most typical fibrino-purulent peritonitis occurs in disease of the appendix in which there is no escape of fæces into the peritoneal cavity.

DR. BELL said that the patient had first complained on Saturday last of heart-burn, but no fever occurred until Monday, when he was brought to the hospital and the operation was performed at ten at night. The appendix was three inches long, and about its middle there was situated a sloughing area through which was oozing a stinking serous fluid; at the site of the ulceration was found a concretion about the size of a white bean. Patient lived thirty-six hours after the operation; there seemed to be paralytic intestinal obstruction, as no flatus was passed.

DR. SHEPHERD thought that this was one of those fulminating cases which seem to be fatal from the onset, and in which operation gives no relief. He recalled a similar case which he had reported last year. Both were rapid, were unrelieved by opera-

tion, and had dark vomit. He thought that such cases should not be classified with those of simple abscess.

Laparotomy for Intestinal Perforation in Typhoid Fever; Death.—DR. JAS. BELL reported this case, as follows:—

Lilly S., aged 18, was admitted to the Montreal General Hospital, under the care of Dr. Stewart, on the 2nd of October. Diagnosis: typhoid fever, tenth day. Temperature range, 100° to 104°F. No special symptoms, but decided tenderness in the right iliac fossa. On the night of the 4th (about midnight) she complained of great pain in the abdomen and had four diarrhoea stools. This pain continued increasing in severity during the day of the 5th, and at 8 P.M. vomiting set in. From that time she retained nothing in the stomach. The temperature, which had varied from 101° to 103° during the day, fell at the same time (8 P.M.) to 98°. She had a very bad night, and when I saw her next day (6th), at 3 P.M., at Dr. Stewart's request, she was evidently in great distress. The abdomen was considerably distended, excessively tender all over, and tense and hard to the touch. There could then be no doubt of the existence of a general peritonitis. I immediately decided upon operation, but did not feel justified in proceeding without the consent of her friends. Having obtained this consent, I proceeded to operate at 10 P.M., twenty-six hours after vomiting had set in with fall of temperature, and about forty-six hours after the first sudden onset of pain and diarrhoea. Assisted by Drs. Roddick and Shepherd, I opened the abdomen in the right iliac region along the outer border of the rectus muscle. There was a copious flow of putrid, sero-purulent fluid containing white flocculi, in all, I should judge, between one and two pints. This was washed out thoroughly with warm boiled water, when the appendix vermiformis was brought out and examined. It seemed healthy and was returned, and the ileum carefully withdrawn, beginning at the cæcum. The intestines, as far as they were examined, were all congested, livid, and adherent with recent lymph. About ten inches from the cæcum, in a thick, firmly adherent layer of lymph, a round opening, about two mm. in diameter, was found on the free border of the bowel, from which

liquid faeces exuded. This portion of the bowel was brought outside the abdomen, the lymph stripped off, carefully washed, and sponged over with sublimate-solution (1-2000). It was then closed by a continuous Lembert suture of fine silk (double row), running transversely across two-thirds of the circumference of the bowel. The bowel was then returned, and the abdominal cavity in the neighbourhood, especially the pelvis, was again flushed with several quarts of warm-boiled water, a large rubber drainage-tube inserted well down into Douglas's fossa, and the abdomen closed. The patient stood the operation well and rallied promptly. She passed wind by the rectum several times during the night, and there was no more vomiting. Next day she was very restless and delirious, and died at 6.40 p.m., twenty hours after operation. Dr. Hamilton, who made the autopsy, reports having found the perforation completely closed and with no evidence of subsequent leakage, and a very extensive general peritonitis, with much lymph and sero-purulent fluid.

Dr. Bell stated that the statistics of this operation as given by Van Hook in an article published in the *Philadelphia Med. News*, Nov. 21st, 1891, shows that up to that time nineteen cases had been operated upon with four recoveries. Of these, however, the diagnosis is said to have been doubtful in the first three cases of recovery—those of Mikulicz, 1884; Escher, 1886; and Taylor, 1891; leaving only one undoubted case (that of Van Hook) of recovery after operation for typhoid perforation. Of course the operation, to be successful, must be done early, hence the necessity for close observation and early diagnosis, as operation offers practically the only hope of saving life in these cases. Median incision is generally recommended and suture in the long axis of the bowel.

The minutes of the last annual meeting were now read, and the President called upon the officers for their reports.

The TREASURER (Dr. J. A. MacDonald) reported that the receipts were \$1,019.18; the expenditure \$855.40, leaving a balance of \$163.78 in the funds of the Society.

The SECRETARY (Dr. Kenneth Cameron) stated that at the

beginning of the session there were 98 ordinary members and 6 temporary members; 10 new members were elected, and one member died during the year,—thus making a total membership of 113. Eighteen regular and two extraordinary meetings had been held, the average attendance being 30, a greater number than in any previous year—the maximum attendance at any meeting being 40, and the minimum 20. Four important deputations were appointed during the year: the first met the City Council for the purpose of recommending the appointment of a sanitary engineer for the city; the second met the members of the Local Government at Quebec to urge the appointment of a coroner's physician for the city and district of Montreal; the third met the members of the Federal Government to impress upon them the necessity of a thoroughly equipped quarantine service as a means of preventing the introduction of Asiatic cholera into the country, and the fourth met the members of the Board of Health of the city to point out many defects in the sanitary condition of the city and to recommend steps to be taken to overcome them.

The LIBRARIAN (Dr. Reed) submitted the following report: I have the pleasure to report that a marked increase in the use of the reading-room and library has been noted during the year 1891-92. It is much to be desired that superior accommodation for readers should be provided in the new rooms which the Society will be obliged to obtain. It is also evident that more journals and works of reference would greatly add to the attractiveness of the department. The journals have been maintained as before, and the valuable series of London, Philadelphia, New York and Montreal publications have been kept up by binding. The promise of additional reading matter has been made by an esteemed ex-president of the Society.

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

The reports were adopted, and votes of thanks to the retiring officers were carried.

The PRESIDENT then called for nominations for office-bearers for the ensuing year, and the following were elected:—

President—Dr. James Stewart.

1st Vice-President—Dr. E. P. Lachapelle.

2nd Vice-President—Dr. James Bell.

Secretary—Dr. Kenneth Cameron (re-elected).

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

Librarian—Dr. T. D. Reed (re-elected).

Council—Drs. F. Buller, F. W. Campbell, and T. G. Roddick.

SIXTH ANNUAL MEETING OF THE AMERICAN ORTHOPÆDIC ASSOCIATION.

SYNOPSIS OF PROCEEDINGS.

The Association met at the New York Academy of Medicine, Sept. 20, 21 and 22, 1892. Dr. Benjamin Lee of Philadelphia, President, in the chair.

After the address of the president, a lengthy programme of nearly forty papers was taken up. Necessarily many papers were read simply by title and will appear in the *Transactions*.

The hip-joint received a large share of attention, there being presented a paper by Dr. A. M. Phelps of New York: *Experiments Demonstrating the Etiology of the various Deformities in Hip-joint Disease*. A large number of dissections had been made and were shown. It was claimed—(1) That in early hip disease *flexion* and *abduction* occur because the fibres of the joint capsule run in a direction downward and inward, so that in the position assumed the fibres are relaxed and the inflamed joint is thus put at ease. (2) That when flexion to the extent of 20 degrees has occurred, the external rotators represented by the gemelli and obturator group and the glutens maximus do not continue to act as external rotators but as abductors, and that the anterior portions of the glutei and the tensor vaginae femoris now act as flexors and internal rotators. (3) There being now but little opposition to the adductors and internal rotators, the limb assumes the position of adduction and flexion in which it is found in the advanced stage of hip disease.

There was but little exception taken to the propositions laid down by Dr. Phelps, and it was uniformly conceded that the paper was a most valuable contribution to the anatomy and surgery of the hip-joint.

Other contributions on this subject were :

Adduction following Fracture of the Neck of the Thigh Bone, by Dr. Hodgen, St. Louis ; and

Report of a Case of Spontaneous Dislocation of the Hip-joint, by Dr. B. E. McKenzie, Toronto. A woman, 21 years of age, in rather poor general health after the birth of her first child, suffered from subacute rheumatism, and was confined to bed two months. During that time she sat up much, keeping the right knee drawn up nearly to the chin and the hands clasped over it. Three months after her first confinement to bed, examination revealed a dislocation of the head of the femur upon the dorsum ilii. The dislocation was easily reduced under chloroform and kept in position by the wearing of a Thomas' hip splint. A year and a half afterwards there is found to be ankylosis, no shortening or other deformity, and no atrophy.

A paper presented by Dr. Royal Whitman of New York proved to be one of great interest : *Observations on the ultimate Deformity of Potts' Disease*. Dr. Whitman showed a case in which he is employing the Taylor spinal brace with modifications. Proceeding upon the proposition that in the normal erect attitude a perpendicular line passing through the tarsus should pass through the acetabulum and the mastoid process, he aims at keeping the spine from curving forward (when disease is in the middle spinal region) in the dorso-lumbar and high dorsal and cervical regions by the employment of pads in front of the points of the shoulders, sufficiently wide to prevent the arms from being raised up in front, by two pads which keep the shoulder blades closely in contact with the posterior part of the thorax, and by a chin-piece, not intended to carry the weight of the head, but to throw the head sufficiently backward to bring the mastoid processes into the perpendicular line passing through the acetabula. Several of the members had seen this case on different occasions during the last year, and claimed that Dr. Whitman was succeeding in a very unusual degree in preventing deformity.

Dr. Nicholas Grattan of Cork, Ireland, was present, and read a paper on *Osteoclasia*, demonstrating the use of his osteoclast

by operating upon three cases of knock-knee and two of bow-legs. To those who admit that there is a place for osteoclasis, Dr. Grattan's instrument must commend itself as the most simple, safe and certain of those given to the profession. The general feeling, however, was that the cases must be few where osteoclasis should be preferred to osteotomy.

Two unusual cases of knee dislocation were reported : *Lateral Dislocation of the Knee-joint due to Local Disease or Paralysis*, by Dr. T. Halsted Meyers, New York, and *A Case of Complete Lateral Dislocation at the Knee due to Traumatism*, by Dr. McKenzie, Toronto.

Dr. A. J. Steele of St. Louis presented a paper which covered much ground and called out a lengthy discussion, viz., *Plaster of Paris in Orthopædics*. For spinal cases Dr. Steele preferred leather, wet and applied so as to fit accurately and then heated to a temperature of 210°F. Dr. Phelps claimed that there was no fixation equal to that obtained by the proper use of plaster-of-Paris. There are many who use it, but do not get the good results that might be obtained because they do not know how to employ it. As a retentive dressing in the treatment of club-foot, Drs. Steele, Phelps, McKenzie, Gillette and others considered it superior to all other means. Drs. Ketch, Judson, Taylor and Schaffer prefer to use various forms of steel club-foot shoes, on the ground that they are more readily removed so as to employ massage to the foot.

Dr. Bradford of Boston presented a most exhaustive and lucid statement of the question of the *Treatment of Resistant Club-foot*. At all ages there are cases where, under an anæsthetic, the foot may be replaced in the corrected position by force alone, without any cutting, employed simply by the hand or various forms of leverage. The next class of cases is found where there are resisting tendons or bands of fascia which may be cut subcutaneously before torsion is applied. Next there comes a class of cases where it is necessary to make an open incision in order to divide the resisting structures more completely, and because the skin is too short to permit correction to be made. Then in some cases correction cannot be fully made, even when all the

resisting soft structures have been cut. Under these circumstances Dr. Bradford prefers to remove a cuneiform section from the outer border of the os calcis. Various bone operations, however, have been recommended. Dr. Morton had presented some good cases operated on by removal of the astragalus, and Dr. Bradford had followed his lead, but had concluded that its removal was not justifiable except as a last resort. The cuneiform section taken from the outside of the foot should never be done as a primary operation, and least of all the removal of the astragalus.

Dr. Phelps followed, reviewing the ground most thoroughly, and claiming that there was nothing in Dr. Bradford's paper which had not been taught and published by him (Dr. Phelps) several years ago.

Dr. Grattan and Dr. McKenzie pointed out that there were cases that could not be restored by any of the foregoing methods, cases where in spite of the fact that the foot *per se* was fully restored to its normal shape, yet the patient toed inward, there being evidently a twist in the limb in some part. Dr. L. A. Sayre, Dr. Hetch and Dr. Vance recommended carrying a brace upward to the thigh and even to the body in order to turn the foot outward. Dr. McKenzie, in rely, claimed that such treatment must be ineffectual, inasmuch as apparatus applied about the thigh would turn inward as the foot turned, and if applied about the pelvis would turn the foot outward, by causing external rotation at the hip and would not make correction where the deformity existed. Dr. Grattan recommended osteoclasis of the tibia and fibula and then placing the foot in the position desired. Dr. Phelps recommended an apparatus devised by Beely of Berlin for children, by which the leg was kept flexed upon the thigh, so that the tendency of the foot to turn inward could not rotate the thigh portion of the appliance, and in older persons osteotomy of any part in which the twist was found most marked. Dr. McKenzie took exception to Dr. Phelps' method of operation in which he makes his first step the cutting of the Achilles tendon, on the ground that it is now much more difficult to correct the varus—always the difficult thing to accomplish successfully.

He was sustained in this criticism by Dr. Steele of St. Louis and Dr. Goldthwaite of Boston. Dr. Phelps assigned as his reason for so proceeding because in one case in every ten there was a very strong, deep ligament connecting the posterior part of the tibia to the os calcis, and as this could not be cut without great danger of wounding the posterior tibial artery, it had to be ruptured, and must be done while the plantar surface of the foot remains intact.

Dr. Moore of Minneapolis presented a *Report of Six Cases of Excision at the Knee joint*, recommending a careful selection of suitable cases and the high incision, four inches above the patella. Dr. Griffiths of Kansas criticised some of the cases as being too radical, an arthrectomy being the operation that was indicated. Dr. Phelps said that arthrectomy had been introduced with a hope of curing the disease and at the same time getting a more able joint. The best surgeons were now agreed that it was better never to try to get movement after operation at the knee, and when operation in the adult was indicated, excision should be performed after Fenwick's method, rounding the femoral segment and hollowing out the tibial so as to get accurate coaptation, avoiding the insertion of nails, if possible, as a means of securing fixation. Under ten years excision should not be performed. If operation is demanded, better amputate.

B. E. MCKENZIE, B.A., M.D.

Selections.

The Danger of Milk from Tuberculous Cows. (By E. F. BRUSH, M.D., Mount Vernon, N.Y.)—

The domesticated bovine animal appears to be, above all other animals, subject to tuberculosis. This animal is capable of bearing the tuberculous processes in its natural state; that is, without breaking down and producing sepsis, which is the cause of death in the disease known variously as phthisis, consumption, and so forth. In other words, a dairy cow will have fulfilled her functions with profit to her owner, and only when she reaches the butcher is it discovered that tuberculous growths are present in various parts of her body. No other animal that I know can be tuberculous for so long a period without exhibiting evidences of the disease, and hence the diagnosis of this disease in the domestic cow is often a very difficult matter. The reason why the domestic cow bears the tuberculous processes without breaking down, is by reason of her natural bodily temperature, her normal average temperature being $102\frac{1}{2}^{\circ}$. This I have ascertained from personal observation on hundreds of apparently healthy animals, extending over several years. This is about the temperature that arises in the human subject during the stage of active tuberculization, and this high temperature in the human subject is a prominent etiological factor in the constitutional disturbance eventuating in the breaking down of the tubercle that leads to the sepsis producing death. Now this normal temperature of the cow admits of the growth of the tubercle without constitutional disturbance, and consequently the animal's resistance is retained and tuberculous processes attain enormous proportions without affecting the general health or usefulness of the animal. Therefore in order that a cow may develop the tuberculosis that kills, some other morbid agency (traumatism, puerperal septicæmia, etc.) must supervene to set up the breaking down process in the tubercle. When acute miliary tuberculosis takes place in the cow, old tuberculous processes are always found, and the temperature then is increased only a degree and a half. Acute miliary tuberculosis in the

cow is a comparatively rare disease, and hence many dairymen, cattle dealers and breeders imagine that tuberculosis is rare or more rare than is reported to exist in dairy cattle for this reason alone, or because so few cases die in comparison with the number of animals afflicted. Therefore these men do not see the latent evidences of disease, their standard of perfect health in dairy animals being the ability of the animal to perform its functions with profit to its owner; and having no comparative standard of health, they regard the animal as sick only when it refuses to yield milk or fatten for the butcher.

Now, what is the danger of milk from tuberculous cows when used as human food? Of course an animal afflicted with acute miliary tuberculosits that kills—and this is the only form of tuberculosis that kills an animal—in this form the milk secretions are suppressed very soon after the onset of the general infection, and as the disease is comparatively rare, milk from these animals is not so common as the literature on the subject would lead one to suppose, while the chronic, latent form of the disease is always more or less present in the ordinary dairies that supply milk for food, and it is very safe to assume that everyone that drinks milk as it is furnished to cities, takes milk from animals afflicted with tuberculosis—the chronic form always, the acute form occasionally. So the question as it seems to me should be, “When is the human subject fit to take the milk from tuberculous cows with impunity?” for there can be little doubt but that in a robust state of health the human being can ingest with impunity the food from tuberculous animals, and probably in many conditions of impaired health such food can be taken without apparent danger. Of course tuberculosis cannot be studied in the same light as other infectious diseases, because the introduction of the poison into the system to-day may require a year or ten years before it is developed into a disease. It is therefore almost utterly impossible for anyone to say in a given case where the infection came from. In the study of this disease, taking isolated or individual cases, where apparent cause and effect stand in close relationship, it is simply a coincidence and is highly misleading. I have watched the medical literature on the subject

very carefully for a number of years, and there are a few cases cited where the evidence pointed strongly to the domestic cow as the direct source of infection ; in other cases where I have myself known children brought up on the milk of tuberculous cows, there has no evil as yet resulted, and I have never been able to associate any case of tuberculosis in the human subject, infant or adult, directly with a tuberculous cow. I know a girl to-day, 13 years old, whose food for two years after weaning was mainly the milk of a tuberculous cow. The cow, of course, was then affected with chronic tuberculosis, and ultimately succumbed to general infection. The milk was given to this child directly from the cow, and warm, and the child has always been remarkably healthy. About two years ago a friend of mine wanted me to see his cow and say what was the matter with her. I found her suffering from acute pulmonary tuberculosis of the miliary type ; she was killed, and we found old tuberculous processes in the mesentery glands. These were not broken down, but a large mass in the mediastinum was broken down and seemed to be the source from whence the general infection spread. The laryngeal glands were also chronically enlarged. This was a family cow, and furnished three children of the household, aged from 2 to 7, with their daily supply of milk. The children, all of remarkably robust health, are perfectly well to-day. But this kind of negative testimony proves no more than the positive testimony that has been thus far accumulated. The disease must be studied, not by isolated cases, but on a broad field. There are some ludicrous instances in the history of the disease illustrating the fallacy of drawing deductions from circumscribed observations. " In 1677 twelve students who had taken their repast in the Convictorium of Leipzig died. At the inquest it was proved that the hotel-keeper had given them, in addition to other food of a bad description, the flesh of emaciated and infected cows, whose viscera were covered with a great number of vesicles, of tubercular nodules, and of purulent tumours. Externally, this flesh did not offer any abnormal appearance." In the light of our knowledge of the present, it is safe to assume that whatever else these students died from, it was not simply

the tuberculous meat that killed them. Nevertheless this unfortunate accident stirred up and exaggerated public feeling on the continent of Europe, and most countries passed stringent laws. Three years after the Leipzig accident the German States enacted very severe means to prevent the sale of meat from tuberculous cattle. Butchers were afraid to have anything to do with animals showing the least trace of the disease, the carcasses and even the instruments used in slaughtering such cattle were turned over to the public executioner. These measures involved a heavy loss to the cattlemen; it was found that the executioners did not destroy the diseased carcasses but consumed them in their own families or sold them to others, and that no injury resulted from the use of the flesh. Then the pendulum began to swing in the opposite direction, and the medical men began to teach that tuberculosis was not a contagious disease, and that the flesh could be eaten with impunity. In fact the meat of tuberculous cows was publicly advertised as of good quality. Zwierein, a doctor of medicine and philosophy at Brokenau, took twenty pounds of flesh from a tuberculous ox and ate it in order to show that such meat was not injurious. This doctor also prepared a broth made from the nodules of the ox, and drank it in the market-place before a large number of people. Then about this time the various governments began to rescind the various stringent regulations, and the prejudice against the use of such food ceased to exist. Now in our day, with the increased knowledge we possess as to the etiology of the disease, stimulating increased discussion and enlarging the literature on the subject, the public are in danger of adopting the same unreasoning prejudice. I say "unreasoning prejudice," not because I underestimate the danger of the presence of tuberculous animals as food producers, but because the methods heretofore adopted are inadequate and one-sided. I believe firmly that all the tuberculosis that affects the human race is derived from the domesticated bovine, because the only people on the face of the earth who enjoy immunity from tuberculosis are those who do not harbour domesticated tuberculous animals. If this broad statement is true, what does it signify? Can we

control the disease by condemning animals only when they come to the butcher, and allowing the milk to be used till he makes the diagnosis for us? If consumption is a contagious disease, and the human race stands in danger of the contagion coming from this most useful food animal, would it not be wise to regulate the breeding of such animals? There are bovines that are reported to enjoy a total immunity from tuberculosis, and so it is possible for us to produce a breed that will not menace the human race. But until the vast number of earnest workers who are moulding medical and scientific opinion unite their forces in this direction, and until we get an animal not tuberculous, we must use our best effort to avert the dangers that now threaten us. I do not believe anybody can tell at what stage of tuberculosis in the cow the milk is safe or becoming dangerous. We have statistical facts enough pointing to the morbid conditions in the human subject creating a receptivity to the contagion. We know that nearly 50 per cent. of diabetic subjects are carried off by pulmonary phthisis; surely we should guard a patient with this disease from the possibility of contagion; also in all other conditions of emaciation and lowered resistance in the adult. With children I have no doubt that the danger is far greater, as their food is solely or chiefly milk. I believe sincerely that a child in perfect health can take the milk from a tuberculous cow with impunity, but a child that is born with a feeble constitution or of tuberculous parent or parents, or suffering from cachexia or any of the wasting diseases, should not be allowed to have milk from a tuberculous cow, no matter what stage of the disease may exist in the cow. As to sterilizing or boiling the milk for these children, the process may or may not eliminate the disease germs—and we have pretty good evidence that boiling does not—but we are certain that either process lowers the nutritive value of a food already below par (if from a tuberculous cow) by reason of the diseased condition of the animal itself. So in the same cases where the milk of tuberculous animals is to be prohibited, the absolute necessity of the highest type of food also necessitates the exclusion of boiled or sterilized milk of any kind. As all cows are not tuberculous, it is perfectly feasible

to select animals to supply infant food. As, however, the chronic forms of tuberculosis in the dairy cow are not easily recognized, the medical man knows little or nothing about the cow, and as the American veterinary schools have paid less attention than the subject deserves, there are few people who are able to detect the earliest symptoms. The necessity for more definite knowledge of the cow herself by all practitioners is evident, so that when it becomes necessary to prohibit the use of food that is apt to kill, there should be more people able to detect the morbid conditions at work in the food-producing animal. We can safely assert that in our time tuberculosis will not be entirely eliminated from the dairy cow. We are approaching the period when it will be; therefore, meanwhile let us guard the susceptible and aid in the advance towards the annihilation of one source of danger to the human race.—*Pract. Monthly.*

The Etiology of Leprosy.—George L. Fitch (*Medical Record*, Sept. 10, 1892) endeavours to answer the question, "What is leprosy, and what causes it?" The answer, he believes, is: A fourth stage of syphilis, which stage occurs epidemically in races virgin to syphilis, or sporadically in persons whose systems have reverted to a condition virgin to the disease, and occurring also in those presenting a distinct neurotic taint, and whose habits have been such—in regard to food supply and manner of living—as would without the before stated conditions produce ordinary scrofula. The paper is too long to give, but he sums up his argument as follows:—

1st. We have the clearest and most unmistakable proof that leprosy is a non-communicable disease, as leprosy, under any circumstance. Cohabitation for many years, inoculation, and drinking the saliva of lepers, have failed in any and every instance to communicate it, and segregation plays no part in preventing the spread of, and non-segregation in spreading, the disease.

2nd. Leprosy invariably follows the introduction of syphilis among virgin races so quickly as to point most strongly to a common origin. We find this exemplified in the case mentioned

by Mr. Sturges, where, in the short space of fifteen years, a large number of the inhabitants of an isolated community became lepers, and where there is no evidence that they ever were in communication with a leper—for it is not a supposable case that crews of merchantmen would have cases of leprosy among them, it being a disease which, in a short time, would surely incapacitate a man for the active duties of a sailor's life, even if the disease were communicable, which I cannot believe it to be.

3rd. It is a well-known fact that syphilis, in an immense majority of cases, cannot be acquired under any circumstances a second time. While the twenty cases in which I inoculated syphilis on lepers are not absolutely conclusive, still it is a point worth consideration. The Hawaiian race are so much under the influence of syphilis that no absolutely reliable data can be drawn from experiments in this line with them. It is to be hoped that this experiment should be tried by competent observers under more favourable circumstances. We all know that syphilis is eminently contagious in its primary condition—absolutely non-contagious in its late manifestations. This being the case, would it not follow as a law that the nearer the initial lesion—the chancre—the more active the virus?

4th. By accepting the view I have put forth, we have an easy, natural solution of leprosy—a non-communicable disease after it declares itself as leprosy—spreading as it does spread, and still being in itself non-contagious and non-communicable. In this way, also, we are able to account for those isolated cases of leprosy which now and again appear in communities otherwise free from the disease, and in which the subjects affected with it can never by any possibility have come in contact with it.

In closing this paper, I wish to put one more observation on record, to be worked out, perhaps, in the future. Without going into particulars and statistics to prove the assertion, it would appear to be the case in Hawaii that members of the German race are far more subject to leprosy than those of the British or American. As far as I could compute, their tendency to acquire the disease is four times as great. This estimate, and it is only an estimate, being reckoned on the number of cases in proportion

to the total number of each of the above races who are inhabitants of the kingdom. Can it be because the British and American are of mixed race and parentage and the German of unmixed only? If we look over the world we shall find leprosy most prevalent, and continuing its ravages longest, in countries whose inhabitants are of unmixed parentage—China, Japan, India, Norway and Hawaii are instances.

Calomel for Hæmorrhoids.—Dr. J. B. James (*British Medical Journal*) states that he has been treating hæmorrhoids for years by simply applying calomel locally, and without exception his treatment has been successful, especially when inflammation was obvious in the hæmorrhoidal mass, characterized by mucous discharge and hemorrhage. Under this simple treatment the symptoms are speedily relieved, with the still more important subsequent advantage of the patient's restoration to health:

An Unusual Case of Lead-Poisoning from a Bullet.—Küster (*Archiv f. Klin. Chir.*, Bd. 43, Heft 3 and 4) reports the case of a man, aged 30, who received a gunshot wound in the knee during the battle of Mars-la-Tour, the bullet striking him on the outer side of the head of the tibia just below the joint. There was no wound of exit. The wound healed and the patient remained well for over seventeen years, there being very little limitation of movement of the knee. In 1888 he first developed symptoms of chronic lead-poisoning—anaemia, colic, loss of appetite, constipation, lead line on gums, and slight tremors of hand; lead was found in the urine, but no albumen. No change in the pulse, no paralysis, no rigidity of the abdomen. In January 1889, Küster opened up the old wound and found numerous small particles of lead imbedded in the bone and periosteum. The colic lasted for a time after the operation and then completely disappeared. The remarkable feature of this case, that the symptoms of lead-poisoning appeared for the first time after $17\frac{1}{2}$ years, Küster explains in this wise: the ball was splintered by the force of the shot and the pieces

were at once encapsuled in new connective tissue. From this was developed a scar tissue, poorly supplied with blood-vessels, and this kept the lead away from the blood and lymph stream. The bone tissue was gradually vascularised until the lead came in contact with the blood.

Sterilization of Rubber Catheters and Bougies.—M. Lanelongue, in *Jour. de Med. de Bordeaux*, recommends keeping these instruments in long glass jars, at the bottom of which are placed several pieces of flannel saturated with mercury. These jars are closed with glass stoppers, and in the mercurial vapour given off from the flannels the sounds retain their calibre and even surface for months. When required for use the instrument is anointed with olive oil kept in a small jar, at the bottom of which is a small quantity of metallic mercury. This is the ideal lubricating material, for if the jars are kept tightly corked the oil remains perfectly sterile.

Epithelioma of the Lip in a Boy.—At a meeting of the Société des Science Médicales de Lyon, June 1892, M. Janin presented a youth aged 14 years on whom he had operated for a cancer of the upper lip. No effect was produced by a course of iodide. Microscopic examination showed it to be an epithelioma.—(*Lyon Médical*, Sept. 4, 1892.)

In the *Lyon Médical*, of October 9, 1892, another case of epithelioma of the lip in a boy aged 14 is reported. This was also treated with iodide of potassium without result, and was finally excised.

Metrorrhagia caused by a Leech.—A woman, aged 56 years, complained of a moderate amount of hemorrhage which would not yield to the ordinary methods. Examination showed a leech attached to the cervix of the uterus. Removal of the unwelcome visitor cured the hemorrhage. The patient was in the habit of bathing in water taken from a pond which contained a great number of *Sanguisugæ*.

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SYMPHYSIOTOMY.

This is an example of a prophet being of no value in his own time, as, although introduced during the eighteenth century, the operation lay dormant and almost unrecognized until within the last decade, or, if recognized, it was only to hold it and its originator up to scorn, but it now seems about to emerge from its obscurity and to take its place among other obstetrical operations.

It was first suggested in 1768 by Sigault, who was a student of medicine in Paris at the time. At first it was applied to unsuitable cases, and the mortality was very high. Kilian records a maternal mortality of 32 per cent., and foetal of 63 per cent., in a collected series of 68 cases, so that it is little wonder that the earlier operators were afraid to incur risks for their patients.

Charpentier, in a work published as late as 1889, says: "By reference to the results obtained from modified Cæsarian section, in particular, it is at once apparent that symphysiotomy has nothing to recommend it." Playfair also condemns it unsparingly, apparently because Churchill states that a separation of the symphysis of four inches only increases the conjugate about half an inch. He says that it might be allowable in lesser degrees of contraction, but the risk of the operation and the subsequent ill effects altogether contra-indicate it. Most of the former writers upon the subject based their views upon experiments practised upon the cadaver, where the separation of the symphysis to any appreciable extent was always accompanied

by the laceration of the sacro-iliac ligaments, but one should not be influenced in forming an opinion upon such a subject by these experiments, as the natural resiliency of the ligaments in the living is much greater than in the dead.

Although never quite abandoned in Italy, symphysiotomy has never been performed in America, Norway, Russia, Sweden, or Switzerland, and only once in Great Britain. The operation in Great Britain can scarcely be called a fair trial of the method, as the patient was a weakly dwarf, who had been in labour for some time, and the foetus was not only dead but putrid.

The revival of the operation of symphysiotomy is due to Morisani of Naples and his pupil Spinelli. Morisani has operated several times, and has such faith in the operation that he sent Spinelli to Paris to urge its adoption by the Parisian obstetricians. While in Paris, Spinelli operated successfully on a case before some of the leading surgeons, and succeeded in creating in the minds of those present such a favourable impression, that Fara-bœuf, Pinard and Tarnier determined to try the operation on the first suitable case which presented itself.

As showing the view now held in France regarding this much abused and neglected operation, here is what Charpentier has recently said upon the subject: "Do not abandon to the foreigner the benefits of an operation which was first successful in our country. Try, once more, symphysiotomy, which, while avoiding all the evil results of embryotomy and Cæsarian section, still too frequent, will allow you to save almost certainly both the lives entrusted to your care. Remember that in this respect you hold in your hands a means of diminishing infantile mortality, an aim towards which all your efforts ought to tend, for now, more than ever, France has need for all her children." This change of sentiment of Charpentier may easily be traced to the great improvement in the mortality, which is due to the cases being properly selected and to strict antisepticism being carried out. Between the years 1886 and 1892, forty-four operations have been performed, with the death of one mother and five children. With such excellent results, we may expect in the future to hear more of Sigault and his operation of sym-

physiotomy, but we must be ever on our guard to see that the case is one suitable for the operation before attempting it, or it will again fall into disuse.

THE SUPPRESSION OF VIVISECTION.

The great discussion which has been going on lately in England regarding physiological experiments on living animals, or, as the opponents of the practice prefer to call it, vivisection, has pretty well died out. For years the physiologists have remained quiet under abuse and misrepresentation, and when at last stirred up to retort, their opponents hold up their hands in holy horror at the plain and forcible language used. The cause of the late discussion was a book called "The Nine Circles," written by Miss Cobbe, a member of the Society for the Total Abolition and Suppression of Vivisection. This book purported to give an authentic account of some twenty-six cases selected to show the cruelty of this mode of investigation. However, there were twenty fundamental misstatements in these twenty-six cases (*Brit Med. Jour.*), and this provoked Mr. Horsley and others to reply in pretty plain Anglo-Saxon. The leaders of the Society, Canon Wilberforce, Bishop Barry and others, would not retract the statements although the falsity of them was proved, and protested against the use of such strong language against "women and clergymen." As an example of their own moderation in this respect, we notice, in the report of one of their meetings, that Canon Wilberforce applies the expression "inhuman devils" to all experimental physiologists. The same meeting formed itself into an admiration society of Mr. Lawson Tait who came forward, *Athanasius contra mundum*, to champion their cause against all comers and to apologise for his profession. Another medical man, Dr. Berdoe, also joins hands with them, but seems to be more anxious to disclaim any responsibility regarding the accuracy of the quotations in the Nine Circles which he reviewed than to carry the war into Africa. The two luminaries of our profession unite with the members of the Society in stating that no great discovery has been made by means of vivisection. Mr.

Tait says "vivisection is a mediæval method of investigation similar to that of pressing an accused prisoner with weights to make him plead, and the conclusions arrived at are erroneous." Canon Wilberforce is the authority for the statement that Harvey's experiments to prove the circulation of the blood were useless, as that fact was shown by examining the web of a frog's foot under a microscope. This style of argument is carried on *ad nauseam*. We expect that we shall hear next of the anti-vaccinators taking up the cry of cruelty to calves as the basis of their opposition to vaccination, but that, indeed, would be carrying brotherly love a little too far.

A QUESTION OF RESPONSIBILITY.

We take the following from the *British Medical Journal* of November 5th, 1892. As we have had outbreaks of typhoid fever in our schools, hospitals, and other institutions in this city, we think the opinion expressed at the end of the article is worthy of consideration by all who are responsible for the care and maintenance of the buildings used for such purposes.

"We regret to learn that a very serious outbreak of typhoid fever has occurred in the Drummond School for the Daughters of Soldiers. The institution is situated about four miles from Dublin, and contains fifty girls. A few weeks ago one child became ill, and recovered, but soon afterwards several others were attacked, and the number steadily increased to sixteen. Of these, unhappily, four had died at the date of our report. The school was inspected by Sir Charles Cameron, who traced the infection to a latrine. All the patients have been removed to hospital, and the school has been entirely closed, the pupils being sent to a house taken for the purpose. Such deaths should, in our opinion, constitute a ground for coroner's inquest, with a view to determine the responsibility for what are preventable deaths, often due to culpable neglect."

THE CHILDREN AT THE EXPOSITION.

At the World's Fair in Chicago even the children are to have a place. The Board of Lady Managers have taken up the work of building and equipping a beautiful structure which shall be

devoted entirely to children and their interests. No funds have been appropriated for this purpose by the Board of Directors, so it rests with the ladies to raise the money as well as to put up the building. As in many cases mothers cannot visit the Fair without taking their children, the Children's Home has been designed so that the little ones may profit by and enjoy their visit. This will give the mothers the freedom of the Exposition while the children are enjoying the best of care and attention. Kindergarten teachers will give talks to the older boys and girls about foreign countries, illustrating what they say by lime-light views and by taking the classes to visit the exhibits. Amusement and instruction is provided for the little ones, and for the babies, a crêche. As well as all this, an exhibit will be arranged illustrating sanitation, diet, education, and amusements for children. Mrs. Geo. L. Dunlap is the chairman and treasurer of the undertaking, and to her all communications should be addressed at 328 Dearborn Avenue, Chicago.

PRELIMINARY ADDRESS

OF THE COMMITTEE OF THE WORLD'S CONGRESS AUXILIARY ON
A MEDICO-CLIMATOLOGICAL CONGRESS.

The year 1893 will be made memorable by the Exposition that the world will hold in Chicago. There will be gathered not only the exponents of the industrial wealth of the world in all the forms of material progress, but the advances made in art, science and civilization will also be set forth.

A series of congresses representing all of the departments of thought and scientific investigation is a true, even an indispensable, part of a World's Exposition. In accordance with this idea the World's Congress Auxiliary has been organized in connection with the World's Columbian Exposition, and has been recognized and approved by the Government of the United States. Among the assemblages to be convened, what more fitting than that the department of medicine, the great healing art, with its many divisions should be conspicuously presented? What more opportune time could have been selected by the Climatologists

of the whole world to meet and compare their observations and views on the different climates of the earth and their effects upon humanity, and the diseases to which flesh is heir.

With that object in view a local committee of arrangements has been appointed by the World's Congress Auxiliary, and an advisory council will be selected from those eminent in this department in different parts of the world to arrange a World's Congress of Medical Climatology, to be held at Chicago during the Exposition season of 1893.

The design is to hold this congress at a time convenient to those who will attend the congresses of the other divisions of the department of medicine which are assigned to open May 29, 1893. This early date was chosen to accommodate those who will desire to attend the Medical Congress to be held in Rome, in November of next year.

All information can be obtained from the chairman of the committee.

President—Charles C. Bonney. *Vice-President*—Thomas B. Bryan. *Treasurer*—Lyman J. Gage. *Secretary*—Benj. Butterworth. *Committee*—T. C. Duncan, M.D. (chairman), I. N. Danforth, M.D. (vice-chairman), L. B. Hayman, M.D. (secretary), J. D. Hartley, M.D., A. K. Crawford, M.D., F. D. Marshall, M.D., J. B. S. King, M.D., J. A. Robinson, M.D., S. A. McWilliams, M.D., and A. L. Clark, M.D.

THE WORLD'S COLUMBIAN EXPOSITION.

BUREAU OF HYGIENE AND SANITATION.

The Bureau of Hygiene and Sanitation of the World's Columbian Exposition has been organized to prepare a collective exhibit illustrative of the present condition of sanitary science. The aim of the Bureau of Hygiene and Sanitation will be to show as adequately as possible the position in which the theory and practice of hygiene stand at the present day, and it is hoped that the Universities and Colleges, the Boards of Health, State and Municipal, the Societies having hygiene and sanitation as their key-notes, the scientists, the physicians, the manufacturers and the public generally will cordially co-operate in the endeavour

to make the exhibition worthy of the science and of our country.

Such varied sources will naturally produce varied results. Varied results shown in diverse ways will serve to heighten the general interest in the one theme. The theme has but one end in view, the improvement of the "common health."

Applications for Space.—It will be necessary for each exhibitor to make formal application for space to the Director-General, and it is requested that these applications be made as early as possible, in order that the department of liberal arts may be able to prepare an estimate of the amount of room that will be required. On addressing the department of liberal arts at Chicago, a blank form of application will be sent to exhibitors without delay. In all cases where foreign countries have appointed commissioners for the Columbian Exposition, applications for space for exhibits from those countries must be made through such commissioners.

The superintendent of the Bureau of Hygiene and Sanitation invites from experts in any of the branches of the science any suggestions or recommendations that will aid in making the exhibit of the division complete and serviceable.

F. W. BREWER,

Superintendent Bureau of Hygiene and Sanitation.

RAILWAY SURGERY AT THE PAN-AMERICAN MEDICAL CONGRESS.

A section of railway surgery of the Pan-American Medical Congress has been organized, with Dr. C. W. P. Brock of Richmond, Virginia, as executive president. A full list of officers has been provided for each of the constituent countries. At the eleventh annual meeting of the Wabash Railway Surgical Association—the first organization of the kind—Dr. C. B. Steven of Fort Wayne was, by unanimous resolution, requested to prepare a paper on *Organized Railway Surgery*, and read the same before the section on railway surgery of the Pan-American Medical Congress. At the same meeting, Dr. Hal. C. Wyman of Detroit offered the following, which was unanimously adopted: "Resolved, that each member of this Association solicit his congressman to interest himself in legislation in favour of the Pan-American Medical Congress.

Obituary.

GEORGE ROSS, A.M., M.D.,

VICE-DEAN OF THE MEDICAL FACULTY OF MCGILL UNIVERSITY.

The profession, not only in this city and country, but also on this continent, has recently sustained a severe loss in the lamented death of our colleague and co-editor—Dr. George Ross. Dr. Ross was born in this city on the 11th of March, 1845. He was the second son of the late Arthur Ross, Esq., Seigneur of Beau Rivage, in the Province of Quebec. His father was also a native of this city, his grandfather, David Ross, being one of the early King's counsel in Canada.

Our friend was educated in Montreal, being the first Davidson gold medallist in the High School. He subsequently graduated in Arts, taking the Chapman gold medal with first class honours in classics. In 1862 he began the study of medicine in McGill University, the Medical Faculty building being at that time in Cotté street. Here also he sustained his reputation as a prize-winner by taking, at the time of his graduation in 1866, the Holmes gold medal given for general proficiency in all the branches of the medical curriculum. He was always known as a steady worker both at the college and at the hospital, and was a universal favourite with his fellow-students. During the summer following his graduation he acted as surgeon on one of the Allan line of steamers, and thus re-established his health which had suffered in some measure from years of close application to study. In the autumn of the same year, on the resignation of Dr. Herbert S. Tew, he was

appointed apothecary to the Montreal General Hospital jointly with the late Dr. John Bell. The late Dr. Joseph Morley Drake was house surgeon at this time, and when he resigned a short time afterwards, Dr. Ross was appointed to succeed him. During his stay in the hospital he was distinguished not only for his professional skill and his capacity as an administrator, but also for his kindly and genial disposition, which endeared him specially to his fellow-residents.

In 1872 Dr. Ross went into general practice in this city, and very soon afterwards was elected attending physician to the Montreal General Hospital and received from the Governors of McGill University the appointment of Professor of Clinical Medicine. By his skill, conscientiousness and kindness he soon obtained the confidence of all who came under his care, thus securing in a very short time a large *clientele*. The late Dr. George W. Campbell always had the highest opinion of Ross' abilities, and when he retired from practice turned much in his way. Shortly after his appointment to the hospital he devoted himself entirely to the charge of medical cases, giving up all share in surgery, and soon became known as a successful teacher in his department. He had a rare capacity for imparting knowledge, and was a keen and careful investigator and a sharp diagnostician. In 1889, on the death of the late Dr. R. P. Howard, Dr. Ross succeeded to the chair of Medicine, and was also made Vice-Dean under Dr. Robert Craik. He still, however, retained an interest in his favourite clinical work by lecturing at the bedside during the summer session. Among the many professional appointments held by Dr. Ross, the following may be mentioned: President of the Medico-Chirurgical Society of Montreal, President of the Canadian Medical Association, Member and Vice-President of the American Association of Physicians, Secretary to the

Montreal General Hospital, and Representative Governor of the College of Physicians and Surgeons of the Province of Quebec. In this latter capacity he was recognised as a power, his voice being constantly raised in support of every measure calculated to increase the dignity of the profession and to raise the standard of medical education in this Province.

Besides contributing occasional articles on professional subjects, notably the articles on peritonitis and aortic aneurism, in Buck's Encyclopædia, he was for many years editor-in-chief of this JOURNAL.

Dr. Ross had been in failing health for three or four years, but could not be induced to relinquish any of his professional or professorial duties, preferring to die in harness.

The above record of Dr. Ross's career shows how much work, valuable to the profession and to mankind, can be crowded into forty-seven years. Such a life is long in deeds if not in years, and is worth an age of mere existence. To those who knew Dr. Ross well this brief record tells a full story, but to others it must necessarily mean less.

Those who associated with the deceased can never forget the quick, clear intellect, the high tone, and the gentlemanly professional bearing which always characterized the man. He was an unwavering friend; a man who rigidly eschewed all *ad captandum vulgus* methods; and one whose manner of life was a model for the young physician. His literary polish combined with his great skill and experience made him an especially acceptable teacher of students at the bedside; while his bearing towards all was the best possible illustration of the happy union of the skilled physician and teacher with the accomplished gentleman and the true man.

While he instructed a class at the bedside, he never forgot the individuality of his students, and many of them

will remember with perennial gratitude his tactful and tender handling of their natures.

His long career as a physician in Montreal was passed without the slightest tarnishing of his brilliant and honourable professional record. Dr. Ross was to the manner born, and it will be hard to fill his place. He resided near the late lamented Dean Howard, who, next to Osler perhaps, was for years his most intimate friend.

How forcibly are we reminded—those who have known and worked with our esteemed and too early departed friend and colleague—that “the night cometh when no man can work!”

RESOLUTIONS OF CONDOLENCE.

At the quarterly meeting of the Governors of the Montreal General Hospital, held Nov. 9th, 1892, the following resolution was adopted :—

“ That this Board of Governors have learned with deep regret of the death of their friend and colleague, Dr. George Ross, for many years a member of the Medical Board, and one of their most valued professional advisers in their various medical departments of the hospital and latterly as their secretary. And the Governors further record their deep sympathy with the family and friends of their deceased friend.”

At a meeting of the Medical Board of the Montreal General Hospital the following resolution was unanimously carried :—

“ *Resolved*,—That the members of the Medical Board of the Montreal General Hospital desire to express their deep sorrow for the loss which they have sustained in the death of their highly esteemed colleague, the late Dr. George Ross.

From long and familiar association with him they had learned to hold him in the greatest respect for his high moral qualities and his distinguished intellectual abilities. Preferred to the chair of Clinical Medicine in the Medical Faculty of McGill University in the year 1872, he had from that time till the date of his death taught this branch of medical science in the wards of the Montreal General Hospital. To the discharge of the duties appertaining to this position he brought a thorough knowledge of the literature of his profession, keen perceptive faculties, a singularly sound and discriminating judgment, and a devotion and perseverance that can only have had their origin in a sincere love of the work.

Few men have been endowed to an equal degree with the faculty of imparting knowledge, and this being associated with a frank, manly sympathetic nature, he never failed to rouse the interest and to stimulate the application of the students of his class.

Honoured by his colleagues, beloved by his patients and friends, revered by his students and respected by all, he has passed from amongst us in the prime of life and at the point of his highest usefulness. His good and faithful work remains.

To the bereaved and sorrowing relatives the Medical Board tender their sincere and heartfelt sympathy.”

At a meeting of the Ottawa Medico-Chirurgical Society, held on Friday, Nov. 11th, 1892, it was resolved :—

“ That the members of this Society desire to express their most sincere sympathy with the family of the late Dr. George Ross, of Montreal, in the loss they have sustained.

Those of this Society who have studied with or been pupils of the late Dr. Ross, have watched with pride and gratification his onward and upward career in the profession of medicine, and all the members of his profession in Ottawa, in paying a last tribute to his memory, fully recognize the eminence he obtained in that great and noble calling.

For his character as a man, his single-minded devotion as a physician, they desire to express their highest approbation, and they consider that by his death McGill University has lost one of her ablest sons, and the Medical Faculty one of its best and most accomplished teachers.”

Personal.

J. A. MacPhail, B.A., M.D. (McGill, '91), has been admitted a Licentiate of the Royal College of Physicians of London.

Dr. D. de J. White (McGill, '90) has been admitted a member of the Royal Colleges of Physicians and Surgeons, Edinburgh, and the Faculty of Physicians and Surgeons, Glasgow.

Medical Items.

A SERIOUS CASE.—According to the *Medical Herald*, a lady from the rural districts took her daughter to town, and, after consulting a number of professors respecting her musical abilities, returned home very much discouraged, and reported to her husband the result of her expedition as follows : “ The first professor said that Almira sings too much with her borax. If she keeps on she will get digestion of the lungs. He said she ought to try the abominable breathing and practice solfudgery. Then the next teacher told me she ought to sing with her diagram, and not smother her voice in the sarcophagus. Then the next, he poked a looking-glass down her throat, and said the phalanx was too small, and the typhoid bone and the pollyglottis were in a bad way ; and I never knew that Almira had so many things down her throat, and I'm afraid to let her sing any more for fear it will kill the poor girl.”