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THE
MONTREAL MEDICAL JOURNAL.

VOL. XXXI.

SEPTEMBER, 1902.

No. 9.

Original Communications.

PRESIDENTIAL ADDRESS.

BY

FRANCIS J. SHEPHERD, M.D.

*Delivered before the Canadian Medical Association, Montreal, September
16th, 1902.*

It has been said by a well-known scientific authority that bores must be classed among the enemies of the human race, and perhaps one of the most objectionable species of this large genus is the Presidential Address Bore. One of the "privileges" of the President of this Association is to deliver the Annual Address; he is the victim of circumstances. I trust, however, that what I say will not prove altogether uninteresting—at any rate if you are bored it will not be for long, for my address will have one thing to recommend it—that is, brevity.

First, let me welcome you all heartily to our city; I hope your visit will be of value to you, not only from a professional standpoint, but also from a social one. The great advantage of these meetings is not so much what one learns from the papers and discussions of the sections, but from that personal intercourse to which such occasions give opportunity—the interchange of thoughts and ideas and the estimating of our fellow-members, not only as surgeons and physicians, but as men, who, like ourselves, are doing their best in this life in trying to solve the difficult problems which are continually confronting us all. At these meetings many friendships are made which last a lifetime. As Horace says, "There is no pleasure equal to that given by a pleasant friend," and the members of the profession from the extreme limits of this great Dominion, meet and are brought together under the most favourable circumstances. Teachers meet their old

pupils, and students their old companions, and, perhaps, rivals. The mystery and clouds which enveloped the old professor, who was looked upon with awe and from a distance, are now dispelled and reveal a human being even as themselves. The man who is only known by his books, or by what he has written in the leading journals, and whose opinion, perhaps, has been regarded as almost infallible, often appears as a very ordinary individual; others again, of whom we have never heard, impress us much by their force of character and the intimate knowledge of their profession which they possess. The man from the east who is slow to adopt new ideas and new methods, is rendered almost breathless by the procedures, apparently most successful, of his professional brother from the west. One reacts on the other; the pace of one is hastened and that of the other retarded, to the benefit of both.

This certainly is a great opportunity for all of us to interchange ideas, and such meetings tend to weld the profession together and to obliterate sectional jealousies. It is well sometimes to remember that we are all Canadians, as well as medical men, and that our interests are those of the Empire as well as of Canada. This community of interest will be much strengthened and accentuated if the Dominion Registration Bill, which has, during the last session, been passed by the Dominion Parliament, be, with the consent of the various provinces, put into force.

DR. RODDICK'S BILL.

Ever since I commenced the study of medicine in 1869, I have heard about a Dominion Registration Bill. For years, at every meeting of this Association it was discussed. Several bills were drawn up and such men as the Hon. Dr. Parker, of Halifax, Sir Chas. Tupper, Dr. R. P. Howard and others, were engaged in trying to frame a bill which would be acceptable to all parties, but all in vain; failure after failure resulted, and for a time it was given up in despair. At last a champion arose who valiantly attacked and solved the problem. You all know him—Dr. T. G. Roddick. I congratulate him on the courage, persistency, skill and ability with which he has pushed through his Medical Bill in the face of many obstacles. It remains now for the different provinces to pass a short act by which the Dominion Bill can be worked. The Dominion is ready for the carrying out of the provisions of the Bill as soon as the provinces agree to it, and I trust that no one province will decline to act and so selfishly render the Dominion Bill inoperative. The first step has been taken and the first barrier overcome; let us hope now that the other obstacles will soon be removed, and then—a man who has

fulfilled all the provincial requirements and passed before the Dominion Board will have the whole Empire ready for him to practice in and all the public services at his disposal. Why, I know of several cases where men, serving as surgeons during the late war in South Africa, could not attend Imperial troops because, forsooth, they had not a license to practice in Great Britain, nor could they ever hope to join the Army and Navy Medical Services.

Such a condition of things is a reflection on our citizenship and a slur on our Imperialism. It only remains for the provinces to remove the disability by accepting the Roddick Bill and so enlarging our opportunities by throwing open practically the whole British Empire to our medical men.

MEDICAL PROGRESS.

It would be useless for me to attempt to describe to you the great advances that have of late been made in medical science, for you are already very familiar with them. For some time it was thought that surgery was outstripping medicine in the race for knowledge, and many regions which were in the exclusive possession of the physician were rudely annexed by the surgeon, and even yet the surgeon is not satisfied, but like the horseleech's daughter, calls for more. Only this year that disease so intimately associated with the physician and named after one—Bright's Disease—has been treated surgically and with some success. The surgeon is still struggling for the possession of this, up until now, distinctly medical disease which the physician is not so willing to part with, waiting with his usual caution for more light.

However, medicine has not been standing still, but has made many advances and has done most magnificent work in various departments. It has fought for this knowledge with great courage and has left on the battlefield not a few heroes, who have fallen bravely fighting with their faces to the foe. I refer especially to the magnificent work done in Cuba in regard to the discovery of causes of infection of Yellow Fever. And what is the result? Why, a region which has been for centuries a pest-house at certain periods of the year, has become a veritable sanitarium. Yellow Fever has been abolished from Cuba, because it has been proved beyond doubt by experiment that the mosquito conveyed the disease, and that if the breeding places of the mosquito were abolished and the fever patient was isolated so that mosquitos could not bite him; they could not convey the disease to others. The chief honour and praise in these investigations must be awarded to Walter Reed, Carroll and Agramonte. Good work is still going on in the investigation of malarial fevers and it is the hope

of all of us that this troublesome and widespread disease may in time be abolished. It is useless by ordinary means to hope to destroy or rather exterminate the mosquito, but, by removing stagnant water and covering their breeding places with coal oil, and sleeping at night under nettings, the disease may be in many cases avoided; but, until we can discover some such means as inoculating the mosquito with a fatal disease and so exterminate him, malaria will be more or less always with us, especially in the tropics.

We have all heard much of the white plague (tuberculosis) in the lay and medical press, how it is propagated, how it may be prevented, how it may be cured; the world has become rather hysterical on the subject, and, no doubt, good will come of it all. But there is another plague, stalking boldly in our midst, and flaunting its banners with the greatest insolence, carrying off its victims by thousands, and disabling and disfiguring thousands of others, the innocent and the guilty with a remarkable impartiality, and yet no notice is taken of it; it is silently, ignored. We must not discuss it or speak of it, or suggest remedies for its extermination; like many things in the Pacific Islands, it is tabooed. We take the utmost care to prevent people catching measles, scarlet fever, chicken-pox, etc., and allow syphilis to come and go amongst us unnoticed and apparently uncared for. It is a most remarkable state of affairs. A poor leper, from whom the chance of taking the disease is small, is shunned, banished and isolated, whilst a syphilitic is allowed to spread the disease at will, without restraint. It is appalling to think of the risk we all run; the innocent suffer often more than the guilty. Because the disease is now a sexual one, although it was not so originally, we must not control it or arrest its spread, or endeavour in any way to ameliorate the condition of those unfortunates who suffer from it. Our neighbours across the line will not allow immigrants with favus to land, but welcome the syphilitic if he have a few dollars in his pocket. Is it not most illogical to build hospitals in order to protect people from measles and scarlet fever, and to allow syphilis to spread itself unchallenged? It is time that the profession took this subject up and educated the public to a better knowledge of sanitary laws.

MODERN LABORATORY TEACHING.

In the wonderful developments of all branches of science, medicine has not lagged behind and the world generally is becoming much interested in the many discoveries in medical science which have lately taken place. Money is being left and donated in large amounts to stimulate still further exertions in the line of research; special sums

are being set aside for the experimental study of the origin and cure of certain diseases, such as carcinoma, tuberculosis, etc., and immense amounts have quite recently been given by the multi-millionaires for the erection and maintenance of splendid laboratories which are intended not so much for the teaching of students as the encouragement of research work.

The medical school is developing into a huge system of laboratories to the exclusion of the lecture, and even the hospital; for the day has not got any longer and laboratory work takes time. We must not forget, however, that laboratories, triumphs of architecture though they be and equipped as they are with all the most modern scientific apparatus, will not themselves produce men of science, they will only give them the opportunity of developing. Such giants as Pasteur, Lister, Koch and the great Virchow, who has lately passed away, were not produced by magnificent laboratories or splendid inducements of fellowships, etc., they made their opportunities and forced nature, by the power of their intellects, to give up to them her secrets; difficulties only stimulated them to put forth still further efforts. Such men are not found at will, but they are born like poets, only occasionally. To paraphrase Sir Thomas Brown—"They do most by laboratories who could do much without them, and he that chiefly owes himself unto himself is the substantial man."

One danger of this great multiplication of laboratories is that it induces men to pursue original investigation who have not the true scientific spirit, and who are utterly unfit for such work. They frequently collect and publish a mass of useless and undigested material and therefrom draw inaccurate conclusions. All this will not redound to the credit of medical science. However, we must hope for the best, knowing a large amount of good work will be done and many valuable discoveries made. I do not wish it to be inferred that I am opposed to the addition of modern laboratories to our medical schools, they are all necessary, but they must not supplant other work quite as important to a man who wishes to become a practicing physician or surgeon. Again, we must remember that the Millenium will not be brought about by laboratories, nor will all scientific problems be solved by them.

There is one laboratory which is not so much frequented now as when I was a student, I refer to the hospital wards. Students, while perhaps more scientific—I say scientific because nowadays every one who spends much of his time in a laboratory learning the use of all kinds of modern apparatus, including our old friend the microscope, is regarded as having a scientific training—I may say that students while perhaps being more scientific (microscopical and mechanical),

have not that intimate personal knowledge of disease which continued observation at the bedside gives them, so that when started in some out-of-the-way place without their scientific machinery, they are like fish out of water. It may soon be that they will not be able to diagnose a fracture without the X-rays; a suppuration without an elaborate system of cultures of the various cocci, typhoid fever without the Widal test, diphtheria without finding the Klebs-Loeffler bacillus, tuberculosis without getting bacilli in the sputum, and so on without end. Students are not taught to observe so accurately the evident symptoms of disease, and as I say, are becoming mere mechanics who need an armamentarium (which only a great hospital or university can possess) to make an accurate diagnosis of an ordinary disease, the higher and more intellectual means of drawing conclusions by inductive reasoning are almost neglected.

This mode of education may do for the few, but for the many who have to practice away from centres, it is not the best method. The reason of it all is that most colleges are now managed by laboratory men who are specialists from the start and who have never practiced medicine, and so never have appreciated the needs of students who, when they graduate, will have to earn their living by attending sick people. The practitioners who are connected with the colleges are too busy, and not living on the premises, so to speak, give up the management gladly to those having more time and having new ideas which they wish to have carried out, especially on laboratory lines. They are eager for original investigations and encourage their men to do such and such a piece of work, forgetting that these men have first to learn the rudiments of a profession by which they have in future to make their living, and that the laboratory work is only a part of their training.

In a recent address delivered at the last meeting of the British Medical Association, Dr. William Japp Sinclair says:—"It was the devotion of the gifts of genius, of the highest intellectual endowment, to clinical investigations, which lent dignity to the labours of former generations of physicians and surgeons, and made their counsels fruitful in conferring permanent benefit on humanity. Enlightened and patient industry, and success in observation and treatment of disease, were long and tedious, but the only sure way to professional distinction and honour. But now, since the advent of the modern development of pathology, and especially of bacteriology, the unknown is accepted as magnificent by the whole medical profession, and a certain distinction can be achieved without much talent or industry; the microtome and the cultivation tube (though work connected with them often resembles

a sad mechanic exercise), have provided a royal road for men into fields of clinical work they have not known how to cultivate. They have shirked the apprenticeship to clinical medicine, yet claim the consideration and emoluments due to the skilled and experienced journeyman."

Now hospital training is most essential to a true knowledge of disease and continual observation at the bedside with good tutorial instruction is a more important factor in the education of a medical man than the best and most complete knowledge of all the bacterial forms. How to properly examine a patient, how to question him so as to get all the salient points of his illness, how to observe his deviation from the normal in posture, color, expression and conduct—how to examine all his excretions and to tell how they differ from those in health; observe the character of the tongue and pulse, the breathing, etc., are essentials. After this the blood may be examined and other methods used to confirm or disprove our previously conceived idea of what the patient is suffering from. All this is much more important than a repetition of a series of experiments in laboratories and the culture of innumerable bacilli, common and rare. Mind you, I do not wish to disparage laboratory teaching, it is essential, but we can have too much of a good thing, and laboratories nowadays take up too much of the student's time in the latter years of his curriculum. The ordinary student should have a good working knowledge of laboratory methods, and this should be obtained chiefly during his first two years, but the refinements if insisted on will be acquired at the expense of some more useful and practical information, for the average student can only hold so much knowledge—it is hopeless to attempt to put a quart measure into a pint pot.

I would suggest that among students only a selected few be made use of for research work and that the average man be not freighted with too much laboratory ballast, but that room be left for other kinds of cargo, the use of which may prove of great value in the voyage through life. Post-graduate medical research work should also be encouraged by every university and opportunities given to every suitable person to continue lines of work for which he is most fitted.

In this connection I should like to read you an extract from an address delivered before the Medical Society at Oxford in 1895 by the late Professor Sir George Humphry, of Cambridge—"There is too great a mass of facts heaped on the memory and too little reflection on them, too great a straining after the practical and too little aspirations for the principles upon which good practice must be based. . . . The sciences of physiology and histology have become, and those of pathology and anatomy are becoming, more separated from medicine,

delegated to special teachers and special examiners—doubtless to the advantage and width of scope of those sciences and to the greater knowledge of them, but I fear there is hereby engendered a tendency to take the student too far afield. . . . It is apt to lead too much to meandering in altitudes, too little to straight going upon *terra firma*, too much to pride and obtrusiveness of supposed higher knowledge, too little to reasoning and too little to power of reasoning upon simple data, and too little to that sort of reasoning which constitutes the basis of "Common Sense." The scientific and the practical, in short, become too much separated; what is needed is a greater regard to that connection between the two which should be maintained through the whole period of study."

SPECIALISM.

Another tendency in medical education is specialism. In some universities they are advocating allowing men to graduate in special lines, such as ophthalmology, dermatology, medicine, surgery, gynecology, etc. This seems to me to be most pernicious, tending to develop much narrowness and also to exaggerate the importance of certain specialties and the public will suffer accordingly. Nowadays, even the most advanced are agreed on the importance of acquiring the rudiments and learning the principles of medicine and surgery and to practice them before commencing the study of any specialty. I do not say that the study of specialties such as otology, ophthalmology, gynecology, and even dermatology should be neglected—on the contrary we should study them all—but in their relation to and bearing on general medicine and surgery, we should have a good working knowledge of each, but an excess of time should not be devoted to any one. A year or two of hospital work followed by some experience in general practice should be managed by any one who wishes to become a broad-minded specialist. In this way he gets a wider grasp of medicine and is less liable afterwards, when he gravitates to a specialty, to run in such narrow grooves.

It is the fashion now for men to go into medicine purposely to become specialists, not that they have any particular aptitude or leaning towards their special choice, but because the opportunities for making money are greater and their time will be their own—they only learn enough medicine and surgery to qualify for a degree. Such a training, although it may be a financial success, will tend to bring the practice of medicine down to a mere trade and the higher and nobler instincts which ought to stimulate a professional man will be no more seen amongst us.

QUACKERY.

I had intended touching at length on the various quackeries which are now so rampant among the most civilized nations and amongst their most cultivated classes, but time warns me I must be brief. I refer to such things as Christian Science, Mental Science, Spiritualism, Vitapathy, Osteopathy and such like—but perhaps they have their uses in this rapid and restless age—they probably are a vent for people who would otherwise have to be confined in asylums at a great expense to the public. Could any individual write such a lot of stuff as the following without there being a suspicion of insanity in the case? “If I believe in the power of disease, my thought atmosphere could not heal a patient. Disease has no power of its own but only as much power as our ignorance concedes to it. Disease is ignorance, intelligence is cure. Disease is but a negation of the ubiquitous life principle. This life principle has taken entire possession of me and my thoughts, I live in it. I am it.” Such stuff as this, *ad infinitum*, is read and believed in by thousands—believed in but not understood. Education will not abolish belief in quacks and quackery. I wrote an article on quackery many years ago, which was published in the Popular Science Monthly, and I closed with the following quotation, which seems appropriate on the present occasion:—“The final though distant extinction of quackery is to be hoped for. It forms a fragment of that final triumph of reason and virtue which is the secret consolation of every philanthropist.”

It is partly due to the profession itself that quackery flourishes. So many men who are unfit for the profession enter it and look on it as a business to make money, honestly perhaps, if possible, but to make it even if the credulity of the public is drawn on. Many of the doctors who write to papers like the “Alkaline Clinic,” the “Medical Short-cut” and others of such a character, have a most misty idea of their profession and apparently are ignorant enough to deceive themselves as well as the public. I fancy they practice all the pathys, —one man from Texas asks the editor if he has anything that is a “dead shot” for eczema, another asks what is the most ‘up-to-date scientific caper’ for goitre, and so on; one specimen of sputum from an old lady, which was sent to the editor for examination, contained tubercle bacilli, diplococci, pneumo-bacilli, saprophytes and pus cells. Another patient, from the writer’s description of her case, is diagnosed as having an extra vulnerability and an extra colony of microbes in her mouth. Such is the literature many feed upon, always looking for tips and sure cures, never accurately diagnosing the disease and always changing treatment. Is it any wonder that quacks flourish?

It is a curious thing, however, that our medical laws seem unable to cope with quacks, but, if a man who has had a regular training has not obtained his license, he is immediately hauled up and fined.

THE KING'S ILLNESS.

I fear I have trespassed on your time long enough, and I must bring this rather-disconnected address to a close. I cannot, however, close without referring to the comparatively recent serious illness of our beloved Sovereign. The result in his case is most satisfactory and is a credit to modern surgery; let all honour be given to the able and wise physicians and surgeons who directed his case. The rewards of the medical profession are not many, nor are they of the highest grade, but in the late award of honours medical men were not forgotten, and those in closest attendance on the King received their share. The responsibilities attaching to the medical attendants were more than usual, and very much depended on their advice as to the most proper and safest procedure. The proper path was chosen and for the time they are praised beyond measure, but unfortunately medical favours are soon forgotten.

“Three faces the Phisition hath;
 “First as an Angel he,
 “When he is sought; next when he helps
 “A God he seems to be;
 “And best of all, when he hath made
 “The Sicke, diseased well
 “And asks his guerdon, then he seems
 “An oughly Fiend of Hell.”

The future of the medical man, however, is bright, and his position in the State is advancing as the necessity for employing him for the solution of all hygienic and sanitary problems becomes evident. In the wars of the future the winning of battles will be of no avail or impossible without an efficient medical service and no government will be complete without a department of public health presided over by medical men.

To enable our profession to obtain the respect and consideration of the public, we must stand shoulder to shoulder, and be true to ourselves. We must act so that no one can point the finger of scorn at us. We must not coquette with anything that has even the appearance of quackery. We must work for the love of our profession, and not for the mere object of getting money. We must neglect no opportunities of meeting together and so increasing our knowledge and stimulating our desire for knowledge. Above all, we must see that in the future none but men of the highest character, and who

have had a proper preliminary training be allowed to enter into the profession of medicine.

OBITUARY.

Since we last met we have lost several valuable members; two especially will be missed, namely, Wyatt G. Johnston, of Montreal, and Wm. S. Muir, of Truro. Dr. Johnston, one might say, died on the battlefield, for he succumbed to sepsis contracted in his ordinary work. He had just been appointed the Professor of Hygiene and State Medicine in McGill University, and a long and successful occupation of the chair was hoped for. He had done much original work already as assistant professor, and in pathology he had made a world-wide reputation. Wyatt Johnston was in some respects a genius—he had the modesty, great originality and capacity for work, which distinguishes such men. He was, if anything, too fertile in ideas, and had so many ventures on the sea of experiment, that some of them necessarily came to grief; not because they were Utopian or impracticable, but because there was not time to work them out. At the Montreal General Hospital he had the confidence and love of his colleagues and his opinion was final on a pathological question. As an expert in the coroner's court he was looked upon as a safe authority and his evidence was never prejudicial and partisan, but was, as scientific evidence ought to be, impartial. He much impressed judges and lawyers with his honesty, sincerity and accurateness. We only occasionally find such men, but in their short lives they often accomplish more than many others who have exceeded the prescribed threescore years and ten.

William Scott Muir has also gone from amongst us. His cheerful countenance and portly form we miss here to-day; he was one who had for many years past regularly attended these meetings, and by his genial disposition and practical common sense endeared himself to all with whom he came in contact. He was a man of affairs and took the greatest interest in everything pertaining to the advancement of the profession; he was always wise in counsel and in scientific discussion had the faculty of going to the root of the matter and stripping the subject of unnecessary accessories. He was an able practitioner and much beloved by his patients. He gained their confidence by his transparent honesty and was always welcomed by his colleagues wherever he went and always found friends. He was a distinct personality and one the medical profession can ill afford to lose—his works will follow him.

Dr. Brunelle, surgeon of the Hotel Dieu Hospital, has also been suddenly removed from among us. He was an able surgeon and teacher, and will be much missed by his colleagues by whom he was held in the highest regard.

CHAUVINISM* IN MEDICINE.

THE ADDRESS IN MEDICINE, CANADIAN MEDICAL ASSOCIATION,
MONTREAL, SEPT. 17TH, 1902.

BY

WILLIAM OSLER, M.D., F.R.S.,

Professor of Medicine, Johns Hopkins Hospital, Baltimore.

A rare and precious gift is the Art of Detachment, by which a man may so separate himself from a life-long environment as to take a panoramic view of the conditions under which he has lived and moved, and that frees him from Plato's den long enough to see the realities as they really are, the shadows as they appear. Could a physician attain to such an art he would find in the state of his profession a theme calling as well for the exercise of the highest faculties of description and imagination as for the deepest philosophic insight. With wisdom of the den only and of my fellow-prisoners, such a task is beyond my ambition and my powers, but to emphasize only the subject that I wish to bring home to your hearts I must first refer to certain distinctive features of our profession:—

I. FOUR GREAT FEATURES OF THE GUILD.

Its noble ancestry.—Like everything else that is good and durable in this world, modern medicine is a product of the Greek intellect, and had its origin when that wonderful people created positive or rational science, and no small credit is due to the physicians who, as Professor Gomperz remarks (in his brilliant chapter "On the Age of Enlightenment," *Greek Thinkers*, Vol. 1), very early brought to bear the spirit of criticism on the arbitrary and superstitious views of the phenomena of life. If science was ever to acquire "steady and accurate habits instead of losing itself in a maze of phantasies, it must be by quiet methodical research." "It is the undying glory of the school of Cos that it introduced this innovation into the domain of its Art, and thus exercised the most beneficial influence on the whole intellectual life of mankind. Fiction to the right! Reality to the left! was the battle cry of this school in the war it was the first to wage against the excesses and defects of the nature philosophy" (Gomperz). The critical sense and skeptical attitude of the Hippocratic school laid the foundations of modern medicine on broad lines, and we owe to it: *first*, the emancipation of medicine

* Definition: A narrow, illiberal spirit in matters national, provincial, collegiate or personal.

from the shackles of priestcraft and of caste; *secondly*, the conception of medicine as an art based on accurate observation, and as a science, an integral part of the science of man and of nature; *thirdly*, the high moral ideals, expressed in that most "memorable of human documents" (Gomperz), the Hippocratic oath; and *fourthly*, the conception and realization of medicine as the profession of a cultivated gentleman.* No other profession can boast of the same unbroken continuity of methods and of ideals. We may indeed be justly proud of our apostolic succession. Schools and systems have flourished and gone, schools which have swayed for generations the thought of our guild, and systems that have died before their founders; the philosophies of one age have become the absurdities of the next, and the foolishness of yesterday has become the wisdom of to-morrow; through long ages which were slowly learning what we are hurrying to forget; amid all the changes and chances of twenty-five centuries, the profession has never lacked men who have lived up to these Greek ideals. They were those of Galen and of Aretæus, of the men of the Alexandrian and Byzantine schools, of the best of the Arabians, of the men of the Renaissance, and they are ours to-day.

A second distinctive feature is the *remarkable solidarity*. Of no other profession is the word universal applicable in the same sense. The celebrated phrase used of the Catholic Church is in truth much more appropriate when applied to medicine. It is not the prevalence of disease or the existence everywhere of special groups of men to treat it that betokens this solidarity, but it is the identity throughout the civilized world of our ambitions, our methods and our work. To wrest from nature the secrets which have perplexed philosophers in all ages, to track to their sources the causes of disease, to correlate the vast stores of knowledge, that they may be quickly available for the prevention and cure of disease—these are our ambitions. To carefully observe the phenomena of life in all its phases, normal and perverted, to make perfect that most difficult of all arts, the art of observation, to call to aid the science of experimentation, to cultivate the reasoning faculty, so as to be able to know the true from the false—these are our methods. To prevent disease, to relieve suffering and to heal the sick—this is our work. The profession in truth is a sort of guild or brotherhood, any member of which can take up his calling in any part of the world and find brethren whose language and methods and whose aims and ways are identical with his own.

* Nowhere in literature do we have such a charming picture illustrating the position of a cultivated physician in society as that given in Plato's Dialogues of Eryximachus, himself the son of a physician, Acumenus. In that most brilliant age the physician was the companion and friend, and in intellectual intercourse the peer of its choicest spirits.

Thirdly, *its progressive character*.—Based on science, medicine has followed and partaken of its fortunes, so that in the great awakening which has made the nineteenth memorable among centuries, the profession received a quickening impulse more powerful than at any period in its history. With the sole exception of the mechanical sciences, no other department of human knowledge has undergone such a profound change—a change so profound that we who have grown up in it have but slight appreciation of its momentous character. And not only in what has been actually accomplished in unravelling the causes of disease, in perfecting methods of prevention and in wholesale relief of suffering, but also in the unloading of old formulæ and in the substitution of the scientific spirit of free enquiry for cast-iron dogmas we see a promise of still greater achievement and of a more glorious future.

And lastly, the profession of medicine is distinguished from all others by *its singular beneficence*. It alone does the work of charity in a Jovian or God-like way, dispensing with free hand truly Promethean gifts. There are those who listen to me who have seen three of the most benign endowments granted to the race since the great Titan stole fire from the heavens. Search the scriptures of human achievement and you cannot parallel in beneficence Anæsthesia, Sanitation, with all that it includes, and Asepsis—a short half-century's contribution towards the practical solution of the problems of human suffering, regarded as eternal and insoluble. We form almost a monopoly or trust in this business. Nobody else comes into active competition with us, certainly not the other learned professions which continue along the old lines. Every few years sees some new conquest, so that we have ceased to wonder. The work of half-a-dozen men, headed by Laveran, has made waste places of the earth habitable and the wilderness to blossom as the rose. The work of Walter Reed and his associates will probably make Yellow Fever as scarce in the Spanish Main as is typhus fever with us. There seems to be no limit to the possibilities of scientific medicine, and while philanthropists are turning to it as to the hope of humanity, philosophers see, as in some far-off vision, a science from which may come in the prophetic words of the Son of Sirach, "Peace over all the earth."

Never has the outlook for the profession been brighter. Everywhere the physician is better trained and better equipped than he was twenty-five years ago. Disease is understood more thoroughly, studied more carefully and treated more skilfully. The average sum of human suffering has been reduced in a way to make the angels rejoice. Diseases familiar to our fathers and grandfathers have disappeared, the death rate from others is falling to the vanishing point, and public health measures have lessened the sorrows and brightened the lives of millions. The

vagaries and whims, lay and medical, may neither have diminished in number nor lessened in their capacity to distress the faint hearted who do not appreciate that to the end of time people must imagine vain things, but in the light of the colossal advances of the past fifty years, what are they but flies on the wheels of progress?

So vast, however, and composite has the profession become, that the physiological separation, in which dependent parts are fitly joined together, tends to become pathological, and while some parts suffer necrosis and degeneration, others, passing the normal limits, become disfiguring and dangerous outgrowths on the body medical. The dangers and evils which threaten harmony among the units, are internal, not external. And yet, more than in any other profession, owing to the circumstances of which I have spoken, is complete organic unity possible. Of the many hindrances in the way time would fail me to speak, but there is one aspect of the question to which I would direct your attention in the hope that I may speak a word in season.

Perhaps no sin so easily besets us as a sense of self-satisfied superiority to others. It cannot always be called pride, that master sin, but more often it is an attitude of mind which either leads to bigotry and prejudice or to such a vaunting conceit in the truth of one's own beliefs and positions, that there is no room for tolerance of ways and thoughts which are not as ours are. To avoid some smirch of this vice is beyond human power; we are all dipped in it, some lightly, others deeply grained. Partaking of the nature of uncharitableness, it has not the intensity of envy, hatred and malice, but it shades off in fine degrees from them. It may be a perfectly harmless, even an amusing trait in both nations and individuals, and so well was it depicted by MM. Cogniard in their play, *La Cocarde Tricolore*, 1831, one character in which was the young recruit Chauvin, that the name Chauvinism has become a by-word, expressing a bigoted, intolerant spirit.* The significance of the word has been widened, and it may be used as a synonym for a certain type of nationalism, for a narrow provincialism or for a petty parochialism. It does not express the blatant loudness of Jingoism, which is of the tongue, while Chauvinism is a condition of mind, an aspect of character much more subtle and dangerous. The one is more apt to be found in the educated classes, while the other is pandemic in the fool multitude—"that numerous piece of monstrosity which, taken asunder, seem men and reasonable creatures of God, but confused together, make but one great beast, and a monstrosity more prodigious than Hydra" (*Religio Medici*). Wherever found, and in whatever form, Chauvinism is a great

* It is by no means easy to see, after reading the play, how the name could have arisen. The nationalism displayed is of a most harmless type. In the sense here employed it has been used by standard writers, as for example, Huxley.

enemy of progress and of peace and concord among the units. I have not the time, nor had I, have I the ability to portray this failing in all its varieties; I can but touch upon some of its aspects, national, provincial and parochial.

II. NATIONALISM IN MEDICINE.

Nationalism has been the great curse of humanity. In no other shape has the Demon of Ignorance assumed more hideous proportions; to no other obsession do we yield ourselves more readily. For whom do the Hosannas ring higher than for the successful butcher of tens of thousands of poor fellows who have been made to pass through the fire to this Moloch of nationalism? A vice of the blood, of the plasma rather, it runs riot in the race, and rages to-day as of yore in spite of the precepts of religion and the practice of democracy. Nor is there any hope of change; the pulpit is dumb, the press fans the flames, literature panders to it and the people love to have it so. Not that all aspects of nationalism are bad. Breathes there a man with soul so dead that it does not glow at the thought of what the men of his blood have done and suffered to make his country what it is? There is room, plenty of room, for proper pride of land and birth. What I inveigh against is a cursed spirit of intolerance, conceived in distrust and bred in ignorance, that makes the mental attitude perennially antagonistic, even bitterly antagonistic to everything foreign, that subordinates everywhere the race to the nation, forgetting the higher claims of human brotherhood.

While medicine is everywhere tinctured with national characteristics, the wider aspects of the profession, to which I have alluded—our common lineage and the community of interests—should always save us from the more vicious aspects of this sin, if it cannot prevent it altogether. And yet I cannot say, as I wish I could, that we are wholly free from this form of Chauvinism. Can we say, as English, French, German or American physicians, that our culture is always cosmopolitan, not national, that our attitude of mind is always as frankly open and friendly to the French as to the English, to the American as to the German, and that we are free at all times and in all places from prejudice, at all times free from a self-satisfied feeling of superiority the one over the other? There has been of late years a closer union of the profession of the different countries through the International Congress and through the international meetings of the special societies; but this is not enough, and the hostile attitude has by no means disappeared. Ignorance is at the root. When a man talks slightly of the position and work of his profession in any country, or when a teacher tells you that he fails to find inspiration in the work of his foreign colleagues, in the words of the Arabian proverb—he is a fool, shun him! Full know-

ledge, which alone disperses the mists of ignorance, can only be obtained by travel or by a thorough acquaintance with the literature of the different countries. Personal, first-hand intercourse with men of different lands, when the mind is young and plastic, is the best vaccination against the disease. The man who has sat at the feet of Virchow, or has listened to Traube, or Helmetz, or Cohnheim, can never look with unfriendly eyes at German medicine or German methods. Who ever met with an English or American pupil of Louis or of Charcot, who did not love French medicine, if not for its own sake, for the reverence he bore his great master? Let our young men, particularly those who aspire to teaching positions, go abroad. They can find at home laboratories and hospitals as well equipped as any in the world, but they may find abroad more than they knew they sought—widened sympathies, heightened ideals and something perhaps of a *Welt-cultur* which will remain through life as the best protection against the vice of nationalism.

Next to a personal knowledge of men, a knowledge of the literature of the profession of different countries will do much to counteract intolerance and Chauvinism. The great works in the department of medicine in which a man is interested, are not so many that he cannot know their contents, though they be in three or four languages. Think of the impetus French medicine gave to the profession in the first half of the last century, of the debt we all owe to German science in the latter half, and of the lesson of the practical application by the English of sanitation and asepsis! It is one of our chief glories and one of the unique features of the profession that no matter where the work is done in the world, if of any value it is quickly utilized. Nothing has contributed more to the denationalization of the profession of this continent than, on the one hand, the ready reception of the good men from the old countries who have cast in their lot with us, and, on the other, the influence of our young men who have returned from Europe with sympathies as wide as the profession itself. There is abroad among us a proper spirit of eclecticism, a willingness to take the good wherever found, that augurs well for the future. It helps a man immensely to be a bit of a hero-worshipper, and the stories of the lives of the masters of medicine do much to stimulate our ambition and rouse our sympathies. If the life and work of such men as Bichat and Laennec will not stir the blood of a young man and make him feel proud of France and of Frenchmen, he must be a dull and muddy mettled rascal. In reading the life of Hunter, of Jenner, who thinks of the nationality which is merged and lost in our interest in the man and in his work? In the halcyon days of the Renaissance there was no nationalism in medicine, but a fine catholic spirit made great leaders like Vesalius, Eustachius, Stensen and others

at home in every country in Europe. While this is impossible to-day, a great teacher of any country may have a world-wide audience in our journal literature, which has done so much to make medicine cosmopolitan.

III. PROVINCIALISM IN MEDICINE.

We may congratulate ourselves that the worst aspects of nationalism in medicine are disappearing before the broader culture and the more intimate knowledge brought by ever-increasing intercourse, yet conditions have favoured in English-speaking countries the growth of a very unpleasant sub-variety, which may be called provincialism or sectionalism. In one sense the profession of this continent is singularly homogeneous. A young man may be prepared for his medical course in Louisiana and enter McGill College, or he may enter Dalhousie College, Halifax, from the State of Oregon, and in either case he will not feel strange or among strangers so soon as he has got accustomed to his environment. In collegiate life there is a frequent interchange of teachers and professors between all parts of the country. To better his brains the scholar goes freely where he wishes—to Harvard, McGill, Yale, or Johns Hopkins; there are no restrictions. The various medical societies of the two countries are, without exception, open to the members of the profession at large. The President of the Association of American Physicians this year (Dr. James Stewart), is a resident of this city, which gave also last year, I believe, presidents to two of the special societies. The chief journals are supported by men of all sections. The text-books and manuals are everywhere in common; there is, in fact, a remarkable homogeneity in the English-speaking profession, not only on this Continent but throughout the world. Naturally, in widely scattered communities, sectionalism—a feeling or conviction that the part is greater than the whole—does exist, but it is diminishing, and one great function of the national associations is to foster a spirit of harmony and brotherhood among the scattered units of these broad lands. But we suffer sadly from a provincialism which has gradually enthralled us, and which sprang originally from an attempt to relieve conditions insupportable in themselves. I have praised the unity of the profession of this continent, in so many respects remarkable, and yet in another respect it is the most heterogeneous ever known. Democracy in full circle touches tyranny, and as Milton remarks, the greatest proclaimers of liberty may become its greatest engrossers (or enslavers). The tyranny of labour unions, of trusts and of an irresponsible press may bear as heavily on the people as imperialism in its worst form. And, strange irony of fate! the democracy of Provincial and State Boards has imposed in a few years a yoke more grievous than that which afflicts our brethren in Great Britain, which took generations to forge.

The delightful freedom of intercourse of which I spoke, while wide and generous, is limited to intellectual and social life, and on the practical side, not only are genial and courteous facilities lacking, but the bars of a rigid provincialism are put up, fencing each state as with a Chinese wall. In the Dominion of Canada there are eight portal entries to the profession, in the United States almost as many as there are States, in the United Kingdom nineteen, I believe, but in the latter the license of any one of these bodies entitled a man to registration anywhere in the kingdom. Democracy in full circle has reached on this hemisphere, a much worse condition than that in which the conservatism of many generations has entangled the profession of Great Britain. Upon the origin and growth of the Provincial and State Boards I do not propose to touch. The ideal has been reached so far as organization is concerned, when the profession elects its own Parliament, to which is committed the control of all matters relating to the license. The recognition, in some form, of this democratic principle, has been one of the great factors in elevating the standard of medical education, and in a majority of the States of the Union it has secured a minimum period of four years of study, and a State Examination for License to Practice. All this is as it should be. But it is high time that the profession realized the anomaly of eight boards in the Dominion and some scores in the United States. One can condone the iniquity in the latter country more readily than in this, in which the boards have existed for a longer period, and where there has been a greater uniformity in the medical curriculum. After all these years that a young man, a graduate of Toronto and a registered practitioner in Ontario, cannot practice in the Province of Quebec, his own country, without submitting to vexatious penalties of mind and pocket, or that a graduate from Montreal and a registered practitioner of this province cannot go to Manitoba, his own country again, and take up his life's work without additional payments and penalties, is, I maintain, an outrage; it is provincialism run riot. That this pestiferous condition should exist through the various provinces of this Dominion and so many States of the Union, illustrates what I have said of the tyranny of democracy and how great enslavers of liberty its chief proclaimers may be.

That the cure of this vicious state has to be sought in Dominion bills and National examining boards, indicates into what debasing depths of narrow provincialism we have sunk. The solution seems so simple, particularly in this country, with its uniformity of methods of teaching and length of curriculum. A generous spirit that will give to local laws a liberal interpretation, that limits its hostility to ignorance and viciousness, that has regard as much or more for the good of the guild as a whole as for the profession of any province—could such a spirit brood

over the waters, the raging waves of discord would soon be stilled. With the attitude of mind of the general practitioner in each province rests the solution of the problem. Approach it in a friendly and gracious spirit and the difficulties which seem so hard will melt away. Approach it in a Chauvinistic mood, fully convinced that the superior and unparalled conditions of your province will be jeopardized by reciprocity or by federal legislation, and the present antiquated and disgraceful system must await for its removal the awakening of a younger and more intelligent generation.

It would ill become me to pass from this subject—familiar to me from my student days from the interest taken in it by that far-sighted and noble-minded man, Dr. Palmer Howard—it would ill become me, I say, not to pay a tribute of words to Dr. Roddick for the zeal and persistence with which he has laboured to promote union in the compound, comminuted fracture of the profession of this Dominion. My feeling on the subject of international, intercolonial and interprovincial registration is this—a man who presents evidence of proper training, who is a registered practitioner in his own country and who brings credentials of good standing at the time of departure, should be welcomed as a brother, treated as such in any country and registered upon payment of the usual fee. The ungenerous treatment of English physicians in Switzerland, France and Italy, and the chaotic state of internecine warfare existing on this Continent, indicates how far a miserable Chauvinism can corrupt the great and gracious ways which should characterize a liberal profession.

Though not germane to the subject, may I be allowed to refer to one other point in connection with the State Boards—a misunderstanding, I believe, of their functions. The profession asks that the man applying for admission to its ranks shall be of good character and fit to practice the science and art of medicine. The latter is easily ascertained if practical men have the place and the equipment for practical examinations. Many of the boards have not kept pace with the times, and the questions set too often show a lack of appreciation of modern methods. This has, perhaps, been unavoidable since, in the appointment of examiners, it has not always been possible to select experts. The truth is, that however well organized and equipped, the state boards cannot examine properly in the scientific branches, nor is there need to burden the students with additional examinations in anatomy, physiology and chemistry. The Provincial and State Boards have done a great work for medical education on this continent, which they would crown and extend by doing away at once with all theoretical examinations and limiting the tests for the license to a rigid practical examination in medicine, surgery and midwifery, in which all minor subjects could be included.

IV. PAROCHIALISM IN MEDICINE.

Of the parochial and more personal aspects of Chauvinism I hesitate to speak; all of us, unwittingly as a rule, illustrate its varieties. The conditions of life which round us and bound us, whether in town or country, in college or institution, give to the most liberal a smack of parochialism, just as surely as we catch the tic of tongue of the land in which we live. The dictum put into the mouth of Ulysses, "I am a part of all that I have met," expresses the truth of the influence upon us of the social environment, but it is not the whole truth, since the size of the parish, representing the number of points of contact, is of less moment than the mental fibre of the man. Who has not known lives of the greatest freshness and nobility hampered at every turn and bound in chains the most commonplace and sordid, lives which illustrate the liberty and freedom enjoyed by minds innocent and quiet, in spite of stone walls and iron bars. On the other hand, scan the history of progress in the profession, and men the most illiberal and narrow, recking of the most pernicious type of Chauvinism, have been among the teachers and practitioners of the large cities and great medical centres; so true is it, that the mind is its own place and in itself can make a man independent of his environment.

There are shades and varieties which are by no means offensive. Many excellent features in a man's character may partake of its nature. What, for example, is more proper than the pride which we feel in our teachers, in the university from which we have graduated, in the hospital at which we have been trained? He is a "poor sort" who is free from such feelings, which only manifest a proper loyalty. But it easily degenerates into a base intolerance which looks with disdain on men of other schools and other ways. The pride, too, may be in inverse proportion to the justness of the claims. There is plenty of room for honest and friendly rivalry between schools and hospitals, only a blind Chauvinism puts a man into a hostile and intolerant attitude of mind at the mention of a name. Alumni and friends should remember that indiscriminate praise of institutions or men is apt to rouse the frame of mind illustrated by the ignorant Athenian who, so weary of hearing Aristides always called the Just, very gladly took up the oyster shell for his ostracism, and even asked Aristides himself, whom he did not know, to mark it.

A common type of collegiate Chauvinism is manifest in the narrow spirit too often displayed in filling appointments. The professoriate of the profession, the most mobile column of its great army, should be recruited with the most zealous regard to fitness, irrespective of local conditions that are apt to influence the selection. Inbreeding is as hurt-

ful to colleges as to cattle. The interchange of men, particularly of young men, is most stimulating, and the complete emancipation of the chairs which has taken place in most of our universities should extend to the medical schools. Nothing, perhaps, has done more to place German medicine in the forefront to-day than a peripatetic professoriate, owing allegiance only to the profession at large, regardless of civic sometimes, indeed, of national limitations and restrictions. We acknowledge the principle in the case of the scientific chairs, and with increasing frequency act upon it, but an attempt to extend it to other chairs may be the signal for display of rank parochialism.

. Another unpleasant manifestation of collegiate Chauvinism is the outcome, perhaps, of the very keen competition which at present exists in scientific circles. Instead of a generous appreciation of the work done in other places, there is a settled hostility and a narrowness of judgment but little in keeping with the true spirit of science. Worse still is the "lock and key" laboratory in which suspicion and distrust reign, and everyone is jealous and fearful lest the other should know of or find out about his work. Thank God! this base and bastard spirit is not much seen, but it is about, and I would earnestly entreat any young man who unwittingly finds himself in a laboratory pervaded with this atmosphere, to get out ere the contagion sinks into his soul.

Chauvinism in the unit, in the general practitioner, is of much more interest and importance. It is amusing to read and hear of the passing of the family physician. There never was a time in our history in which he was so much in evidence, in which he was so prosperous, in which his prospects were so good or his power in the community more potent. The public has even begun to get sentimental over him! He still does the work; the consultants and the specialists do the talking and the writing—and take the fees! By the work, I mean that great mass of routine practice which brings the doctor into every household in the land and makes him, not alone the adviser, but the valued friend. He is the standard by which we are measured. What he is we are; and the estimate of the profession in the eyes of the public is their estimate of him. A well-trained sensible family doctor is one of the most valuable assets in a community, worth to-day, as in Homer's time, many another man. To make him efficient is our highest ambition as teachers, to save him from evil should be our constant care as a guild. I can only refer here to certain aspects in which he is apt to show a narrow Chauvinism hurtful to himself and to us.

In no single relation of life does the general practitioner show a more illiberal spirit than in the treatment of himself. I do not refer so much to careless habits of living, to lack of routine in work, or to failure

to pay due attention to the business side of the profession—sins which so easily beset him—but I would speak of his failure to realize, first, the need of a life-long progressive personal training, and secondly, the danger lest in the stress of practice he sacrifice that most precious of all possessions, his mental independence. Medicine is a most difficult art to acquire. All the college can do is to teach the student principles, based on facts in science, and give him good methods of work. These simply start him in the right direction, they do not make him a good practitioner—that is his own affair. To master the art requires sustained effort, like the bird's flight which depends on the incessant action of the wings, but this sustained effort is so hard that many give up the struggle in despair. And yet it is only by persistent intelligent study of disease upon a methodical plan of examination that a man gradually learns to correlate his daily lessons with the facts of his previous experience and with that of his fellows, and so acquires clinical wisdom. Nowadays it is really not a hard matter for a well-trained man to keep abreast of the best work of the day. He need not be very scientific so long as he has a true appreciation of the dependence of his Art on Science, for, in a way, it is true that a good doctor may have practice and no theory, art and no science. To keep up a familiarity with the use of instruments of precision is an all-important help in his art, and I am profoundly convinced that as much space should be given to the clinical laboratory as to the dispensary. One great difficulty is that while waiting for the years to bring the inevitable yoke, a young fellow gets stale and loses that practised familiarity with technique which gives confidence. I wish the older practitioners would remember how important it is to encourage and utilize the young men who settle near them. In every large practice there are a dozen or more cases requiring skilled aid in the diagnosis, and this the general practitioner can have at hand. It is his duty, and failing to do so he acts in a most illiberal and unjust way to himself and to the profession at large. Not only may the older man, if he has soft arteries in his grey cortex, pick up many points from the young fellow, but there is much clinical wisdom afloat in each parish which is now wasted or dies with the old doctor, because he and the young men have never been on friendly terms.

In the fight which we have to wage incessantly against ignorance and quackery among the masses and follies of all sorts among the classes, *diagnosis*, not *drugging*, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks.

Few men live lives of more devoted self-sacrifice than the family physician but he may become so completely absorbed in work that leisure is unknown; he has scarce time to eat or to sleep, and, as Dr. Drummond remarks, in one of his poems, "He's the only man, I know men, dont get no holiday." There is danger in this treadmill life lest he lose more than health and time and rest—his intellectual independence. More than most men he feels the tragedy of isolation—that inner isolation, so well expressed in Mathew Arnold's line—"We mortal millions live *alone*." Even in populous districts the practice of medicine is a lonely road which winds up-hill all the way and a man may easily go astray and never reach the Delectable mountains unless he early finds those shepherd guides of which Bunyan tells, *Knowledge, Experience, Watchful* and *Sincere*. The circumstances of life mould him into a masterful, self-confident, self-centred man, whose worst faults often partake of his best qualities. The peril is that should he cease to think for himself he becomes a mere automaton, doing a penny-in-the-slot business which places him on a level with the chemist's clerk who can hand out specifics for every ill, from the "pip" to the pox. The salt of life for him is a judicious skepticism, not the coarse crude form, but the sober sense of honest doubt expressed in the maxim of the sly old Sicilian Epicharmus, "Be sober and distrustful; these are the sinews of the understanding." A great advantage too of a skeptical attitude of mind is, as Green the historian remarks, "one is never very surprised or angry to find that one's opponents are in the right." It may keep him from self-deception and from falling into that medical slumber into which so many drop, deep as the theological slumber so lashed by Erasmus, in which a man may write letters, debauch himself, get drunk, and even make money—a slumber so deep at times that no torpedo-touch can waken him.

It may keep the practitioner out of the clutches of the arch enemy of his professional independence—the pernicious literature of our camp-followers, a literature increasing in bulk, in meretricious attractiveness and in impudent audacity. To modern pharmacy we owe much and to pharmaceutical methods we shall owe much more in the future, but the profession has no more insidious foe than the large borderland pharmaceutical houses. No longer an honoured messmate, pharmacy in this form threatens to become a huge parasite, eating the vitals of the body medical. We all know only too well the bastard literature which floods the mail, every page of which illustrates the truth of the axiom, the greater the ignorance the greater the dogmatism. Much of it is advertisements of nostrums foisted on the profession by men who trade on the innocent credulity of the regular

physician, quite as much as any quack preys on the gullible public. Even the most respectable houses are not free from this sin of arrogance and ignorant dogmatism in their literature. A still more dangerous enemy to the mental virility of the general practitioner, is the "drummer" of the drug house. While many of them are good sensible fellows, there are others, voluble as Cassio, impudent as Autolycus and senseless as Caliban, who will tell you glibly of the virtues of extract of the coccygeal gland in promoting pineal metabolism, and are ready to express the most emphatic opinions on questions about which the greatest masters of our art are doubtful. No class of men with which we have to deal illustrate more fully that greatest of ignorance—the ignorance which is the conceit that a man knows what he does not know; but the enthrallment of the practitioner by the manufacturing chemist and the revival of a pseudo-scientific polypharmacy, are too large questions to be dealt with at the end of an address.

But there is a still greater sacrifice which many of us make, heedlessly and thoughtlessly forgetting that "Man does not live by bread alone." One cannot practice medicine alone and practice it early and late, as so many of us have to do, and hope to escape the malign influences of a routine life. The incessant concentration of thought upon one subject, however interesting, tethers a man's mind in a narrow field. The practitioner needs culture as well as learning. The earliest picture we have in literature of a scientific physician, in our sense of the term, is as a cultered Greek gentleman; and I care not whether the young man labors among the beautiful homes on Sherbrooke Street or in the slums of Caughnawaga, or in some sparsely settled country district, he cannot afford to have learning only. In no profession does culture count for so much as in medicine, and no man needs it more than the general practitioner, working among all sorts and conditions of men, many of whom are influenced quite as much by his general ability, which they can appreciate, as by his learning of what they have no measure. The day has passed for the "practiser of physic" to be like Mr. Robert Levet, Dr. Johnson's friend, "Obscurely wise and coarsely kind." The wider and freer the man's general education the better practitioner is he likely to be, particularly among the higher classes to whom the reassurance and sympathy of a cultivated gentleman of the type of Eryximachus, may mean much more than pills and potions. But what of the men of the type of Mr. Robert Levet or "Ole Docteur Fiset," whose virtues walk a narrow round, the men who do the hard general practices in the poorer districts of the large cities, in the factory towns and in the widely scattered rough agricultural regions—what, I hear you say has culture to do with him? Everything! It is the

bichloride which may prevent the infection and may keep a man sweet and whole amid the most debasing surroundings. Of very little direct value to him in his practice—though the poor have a pretty keen appreciation of a gentleman—it may serve to prevent the degeneration so apt to overtake the over-worked practitioner, whose nature is only too prone to be subdued like the dyer's hand to what it works in. If a man does not sell his soul, if he does not part with his birthright of independence for a mess of pottage to the Ishmaelites who harrass our borders with their clubs and oppress us with their exactions, if he can only keep *free*, the conditions of practice are nowhere incompatible with St. Paul's noble Christian or Aristotle's true gentleman.*

Whether a man will treat his professional brethren in a gentlemanly way or in a narrow illiberal spirit is partly a matter of temperament, partly a matter of training. If we had only to deal with one another the difficulties would be slight, but it must be confessed that the practice of medicine among our fellow creatures is often a testy and choleric business. When one has done his best or when a mistake has arisen through lack of special knowledge, but more particularly when, as so often happens, our heart's best sympathies have been engaged, to be misunderstood by the patient and his friends, to have evil imputed and to be maligned, is too much for human endurance and justifies a righteous indignation. Women, our greatest friends and our greatest enemies, are the chief sinners, and while one will exhaust the resources of the language in describing our mistakes and weaknesses, another will laud her pet doctor so indiscriminately that all others come under a sort of oblique condemnation. It is hard to say whether as a whole we do not suffer just as much from the indiscriminate praise. But against this evil we are helpless. Far otherwise, when we do not let the heard word die; not to listen is best, though that is not always possible, but silence is always possible, than which we have no better weapon in our armoury against evil-speaking, lying and slandering. The bitterness is when the tale is believed and a brother's good name is involved. Then begins the worst form of ill-treatment that the practitioner receives—and at his own hands! He allows the demon of resentment to take possession of his soul, when five minutes frank conversation might have gained a brother. What more joyful in a small or large community than to see the brethren dwelling together in unity. The bitterness, the rancour, the personal hostility which many of us remember in our younger days has been very largely replaced by a better feeling and while the golden rule is not always,

* Sir Thomas Browne.

as it should be, our code of ethics, we have certainly become more charitable the one towards the other.

To the senior man in our ranks we look for an example, and in the smaller towns and country districts if he would remember that it is his duty to receive and welcome the young fellow who settles near him, that he should be willing to act as his adviser and refuse to regard him as a rival, he may make a good friend and perhaps gain a brother. In speaking of professional harmony, it is hard to avoid the trite and commonplace, but neglecting the stale old chaps whose ways are set and addressing the young, to whom sympathy and encouragement is so dear, and whose way of life means so much to the profession we love, to them I would give the motto of St. Ambrose. It is told of St. Augustine, after having decided to become a Christian, that when he visited St. Ambrose, at dinner with the venerable father and his brethren, one motto above all others on the wall of the refectory caught his eye and heart, "If you cannot speak well of your brother, keep silence!"

With our History, Traditions, Achievements and Hopes, there is little room for Chauvinism in medicine. The open mind, the free spirit of science, the ready acceptance of the best from any and every source, the attitude of rational receptiveness rather than of antagonism to new ideas, the liberal and friendly relationship between different nations and different sections of the same nation, the brotherly feeling which should characterize members of the oldest, most beneficent and universal guild that the race has evolved in its upward progress—these should neutralize the tendencies upon which I have so lightly touched.

I began by speaking of the art of detachment as that rare and precious quality demanded of one who wished to take a philosophic view of the profession as a whole. In another way and in another sense this art may be still more precious. There is possible to each one of us a higher type of intellectual detachment, a sort of separation from the vegetative life of the work-a-day world—always too much with us—which may enable a man to gain a true knowledge of himself and of his relations to his fellows. Once attained, self-deception is impossible, and he may see himself even as he is seen—not always as he would like to be seen—and his own deeds and the deeds of others stand out in their true light. In such an atmosphere pity for himself is so commingled with sympathy and love for others that there is no place left for criticism or for a harsh judgment of his brother. "But these are Thoughts of things which Thoughts but tenderly touch," as that most liberal of men and most distinguished of general practitioners, Sir Thomas Browne, so beautifully remarks; and it may be sufficient to remind this audience, made up of practical men, *that the word of action is stronger than the word of speech.*

THE CONTRIBUTION OF PATHOLOGY TO SURGERY.

THE ADDRESS IN SURGERY, CANADIAN MEDICAL ASSOCIATION, SEPT.
17TH, 1902.

BY

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There is no finer chapter in the history of our race than that which deals with the exploits of the early navigators of the fifteenth and sixteenth centuries. The sea was not then what it is now, mapped and measured, and marked by innumerable highways of travel. It was a dim mysterious realm, with unknown bounds: little more was known of its nature than when Homer sang, with a grand vagueness, of the Streams of Ocean.

And yet from Palos or from Bristol men set forth, urged by the deathless yearning of the human heart to know and to do; with no guide but the scanty scraps of experience, and their own hardy resolution, without sextant, without chronometer, without log-book, without chart, they sailed out into the vast, unknown, unmeasured, unsounded sea, fearing, but daring Mystery, and hoping for the Hesperides.

The seamanship of those heroes was perfect, their navigation, their knowledge of the principles which lay at the foundation of their art, their equipment in all that is now deemed essential, was crude and rudimentary. How could it be otherwise when Newton was yet unborn, when the old Ptolemaic theory of the universe still held sway, and at a time when success and failure were attributed to the benign or baleful influences of the stars by which they sought to guide their course?

Long and slow was the progress of their science; centuries were to pass before their dreams came true, many and various were the sources from which help came, and even to-day there are problems unsolved, and a still elusive goal.

Nothing is more striking in the evolution of nautical science than the marvellous development of the last century, due chiefly to the introduction of steam as a motive power. It has created a new epoch.

I knew an old sea captain who told me that when he was an apprentice he sailed one winter morning in a brig called the "Westmoreland" from Belfast, bound out to St. John, N.B. "And," said the old man, "after boxing about the Western Ocean for one hundred and forty days we brought up in Cork harbour." Compare such a contingency with a voyage in such a ship as the "Oceanic," which leaves her dock with the

punctuality of clockwork, a scarcely greater punctuality than that with which she arrives in dock on the other side of the Atlantic.

The contributors to this wonderful advance may be divided into two classes. There was the practical sailor, quick to observe, ready to act, full of resource, with all

“The virtues which his perilous life
Extracts from Nature’s elemental strife.”

And there was the philosopher, the man of reflection, who pondered the reports of these adventurers in strange seas and under new skies, and sought for explanations of mystery, who followed Learning for her own dear sake, and counted himself happy if only he might know the causes of phenomena and evolve a Cosmos from seeming Chaos.

A parallel, not altogether fanciful, may be drawn between those pioneers of ocean travel and the early masters of our craft. Those made their way through the uncertain world of waters, very synonym of change and unrest, guided on the one hand by their own hard-won experience and the traditions of their fathers, and on the other by the application of principles laid down by men who made a philosophic study of Nature, who searched into the secret of the sea, who built up the Sciences of Astronomy, Geography, Hydrography.

And these worked in the sphere of the human organism, mysterious, intricate, inexplicable, and they too worked on two lines, the long and weary and often fallacious track of empiricism, and the ampler but often disconnected road constructed by those whose chief aim was, in the words of him who led the vanguard, to “study and search out the secrets of nature.”

There was a Cosmography—of a kind, and methods of measuring Space and Time before Copernicus and Tycho Brahe, and there must have been some sort of Pathology, some notion of the nature of the morbid process in the mind of the first prehistoric surgeon who plugged a wound or opened an abscess. The troglodyte surgeon must have had some notion why he chipped holes in his patient’s skull.

But was the lore of the mediæval mariner, regarding the earth as a fixed expanse, around which the heavenly bodies wheeled, casting a horoscope to secure a favourable voyage, sailing a wonder-sea of mystery and portent—a man who had anchored to the Kraken’s rugged side and who was well acquainted with the Mermaid—was his science more unscientific than that of his brother the surgeon? What a limbo of fantastic and irrational notions filled the minds of our colleagues of the Middle Ages! Yes, even of men who lived a century ago and whose voices still have power.

It is difficult for us to realize the strange notions of a time when the

ancient humoral pathology in a very solidist manner still projected itself into the vortex of the Renaissance, when humoralist and solidist rose, struggled, and sank, to reappear in new disguises, as they do to this day, when the vitalist imagined his "Archeus," when skilled clinicians considered scabies a typical dyscrasia, and when a keen and cultured mind could believe in the "*pulvis sympatheticus*," and when the grotesque philosophy of Paracelsus, with its strange fore-gleams of latter-day truth, held sway. Mediæval pathology is like a dark and troubled sea, where gleams of truth shine pale through wildering mists, and where conflicting currents scethe and boil,—“dark fluxion, all unfixable by thought.”

And what Navigation was to Seamanship, Pathology is to Surgery.

Advance in nautical science was conditioned by the advance in the study of natural phenomena, by invention of instruments of precision, and the application of these to the purposes of the mariner. From China came the mariner's compass; from Nuremberg came the watch, precursor of the chronometer; from Flanders came Mercator with his charts; Scotland sent Napier with his logarithms; England supplied Hadley and the sextant; and the fore-runner of the Nautical Almanac—the mariner's *vade mecum*—in the shape of the first almanac, came from Poland.

And nothing is clearer than that progress in surgery depends on the study of vital phenomena, and the application of the results of these studies and of new methods to the problems of disease and injury.

The pyrotechnics of Paracelsian dreamery were still blazing on the dim coasts of the old world pathology when the morning star of the new era appeared in the person of the first real anatomist, Vesalius, and day dawned with William Harvey, the Columbus of modern medicine. Harvey led the way in the application of experimental methods to biological questions. The result of his great discovery was a complete change in pathological ideas, and a new school of pathology soon arose under the guidance of the famous Boerhaave, at Leyden. He, impressed by the study of the physics of the circulation, and aided by the discovery of the capillary system by Malpighi, and of the red corpuscles of the blood by Swammerdam and Leeuwenhoek, initiated the study of the local changes in diseased parts, and soon the first text-book of General Pathology was brought out by Gaubius, distinctly biological in its view, and having for its text the maxim of Boerhaave, "*Morbus est vita præter naturam.*"

It was under the influence of these views and of the new methods of study that Morgagni produced his epoch-making book, "*De Sedibus et Causis morborum*," of which Virchow says, "it was the first time that

the sum total of actual knowledge of the material alterations which disease occasions in the body was brought before the world."

With this Pathological Anatomy began, and the way was prepared for John Hunter. He it was who introduced the experimental method into the study of disease, and by virtue of his intuitive genius, his amazing capacity for work, and his practical applications of the results of his researches, has well earned the title *Father of Scientific Surgery*. "From the time of Hunter to the present time," says Billroth, "English surgery has had something of grandeur and style about it."

In the vast field of subjects which Hunter explored it is difficult to single out any one for pre-eminence. But it is undoubtedly on the score of his celebrated operation for popliteal aneurism that he is generally known as a practical surgeon. Mr. Butlin, in his interesting Cavendish Lecture, tells us, not without a stroke of humour, of the great expectations he had formed of interesting instances of the direct influences of pathological study on practical surgery, and how he found absolutely nothing of the sort in the history of medicine until he came to Hunter's operation, which he calls "the *one* example, the *only* example up to that time, of deliberate surgical invention founded on the study of pathology by the man who made the invention."

But it is not in particular instances only, in improved methods of diagnosis, in aids to operative surgery, that the contribution of Pathology is found. It is rather in the new principles gained, and in the new attitude towards Nature and Phenomena that Pathology has ennobled Surgery.

Hunter helped us to understand our power of interrogating Nature, of interpreting her answer, and our power of applying the knowledge so gained to the practical problems of our art. This was the beginning of Scientific Surgery, but much remained to be done, and it is noteworthy that the chief actors in the movement now were among the surgeons. Who can estimate the value of the impetus given to pathology by Xavier Bichat in his studies of the tissues, or of Andral in his hæmatopathology. After Bichat came Dupuytren, the practical surgeon, and in England Charles Bell revolutionized our theories of the Nervous System.

The next great advance was to arise from a study of plant life, and the researches of Schwann and Schleiden paved the way for the Cellular Pathology of Virchow—the basis of our present system of Pathology.

And a shadow falls upon us gathered here as we realize that the veteran master, the undisputed leader of pathological thought and progress for over fifty years, has fallen, and we unite in the desire to lay our spray of cypress on the tomb of him whom we all considered the greatest German of our time.

But with all these new acquisitions, the exact anatomical knowledge, the clearer views of morbid action, there was still for the surgeon an unexplored sea of mystery. The Pathologist went on his way rejoicing in his rapidly increasing store of knowledge, the Surgeon still lingered, with anxious mind and heavy heart, for the question of questions to him was still unanswered.

The healing of wounds was the Enigma of Surgery, and the characteristic difficulty was the uncertainty attaching to the healing process. Here a wound healed quietly and soundly, without pain and without causing constitutional disturbance, and there it became inflamed, suppurated for weeks, causing intolerable anguish and exhausting the patient. Why the difference? Why so much more danger from the thrust of a pike than the stroke of a sabre? Why should a fracture of the leg, in which a splinter of bone had cut through the skin, be so much dreaded, while multiple simple fractures were seldom dangerous to life? Why was the peritoneum virtually a closed door to the surgeon's desires? Why did the implication of a joint add so terribly to the danger of a penetrating wound? Who can estimate the amount of anxious thought that has been given to this subject, who can gauge the disappointments that resulted from the application of so many theories? Empiricism was at its wits' end. Cold lotions, and warm poultices, stimulating liniments and soothing ointments, wet dressings and dry, no dressings at all, all had their advocates, their occasional successes and their inevitable failures. The only certainty in the whole sad field was the certainty of failure, the certainty that however brilliant a series of cases a surgeon might have, it was sure to be broken some day, for some inexplicable reason. We can only wonder at the marvellous correctness of some of the guesses at truth that were made, and admire the results which were sometimes attained by men who would almost appear to have had an intuitive, if unconscious, knowledge of the truth. Witness, for instance, the extraordinary results of Alanson at the Royal Infirmary of Liverpool in the beginning of last century. And mark that Alanson was a pupil of John Hunter.

The idea of a *materies morbi* is a very old one, and doubtless the idea that this might be a species of living matter is also old. The notion of the parasitism of disease crops up repeatedly in the history of pathology. Monti, in his "Fundamental Data of Modern Pathology," claims for his fellow-countryman, Agostino Bassi, the distinction of being the founder of pathogenic microbes.

However this may be, it is certain that by the close of the eighteenth century this conception was present in the minds of many scientific workers.

It was reserved for Schönlein to prove in 1839 that the disease known as Tinea, and considered as a typical "humoral" disease, and not only so, but hereditary, was really due to the growth of a fungus.

About fifty years ago Davaine and Chauveau proved that the disease known as anthrax was caused by the presence of an organism discovered in the blood of affected animals by Pollender in 1849.

The mists of conjecture were condensing and trickling into clear tiny rivulets, and soon these were collected by the genius of Pasteur into the grand fountain head of the mighty stream of bacteriology. But the practical surgeon had gained nothing towards the elucidation of his enigma. Perhaps at no time was there greater helplessness in the treatment of wounds. The advance in diagnosis and improved methods of operating introduced by such men as Syme, and Nelaton, and other brilliant surgeons of the period, and the great discovery of anæsthesia had stimulated operators to increased activity. But the surgeon and his patient seemed the sport of a capricious Fate. Epidemics of septic fever, pyæmia, hospital gangrene, and erysipelas decimated hospital wards and often attacked fifty per cent. of all operation cases, and hospitals were being closed. Surely surgery was suffering eclipse.

Then came Lister, and the dark hemisphere rolled in one grand movement from its age-long penumbra into noon-day. Surgery, modern Surgery, was born. In the chronology of our craft, time is divided into Before and After Lister. The shadows of fear, anxiety and uncertainty left the surgeon's face, for now that

"Wise rare smile was sweet with certainties."

It is a fascinating thing to trace the history of a great discovery, and when the time comes to write the history of the Listerian Renaissance, it will be found the Romance of Surgery.

"The great artist," says Amiel, "is the simplifier." "Art is simply the bringing into relief of the obscure thought of nature; a simplification of the lines, a falling into place of groups otherwise invisible. The fire of inspiration brings out, as it were, designs traced beforehand in sympathetic ink. The mysterious grows clear, the confused plain; what is complicated becomes simple, what is accidental, necessary. . . . Every ideal is the key of a long enigma." Lister's ideal fitted the key to the Enigma of Surgery.

I do not know that we are yet in a position to understand the profound change which this ideal brought into pathology. We cannot yet find a proper perspective to view the work of him who is in surgery what Newton was in physics, "that master mind to which," as Pearce Gould says, "we owe the greatest impetus that surgery has even felt."

As the new system was developed step by step with irresistible logic and exact experiment, what illimitable vistas opened up before the surgeon, what realms undreamed of before.

“Then felt I like some watcher of the skies
 When a new planet swims into his ken ;
 Or like stout Cortez when with eagle eyes
 He stared at the Pacific—and all his men
 Look'd at each other with a wild surmise—
 Silent, upon a peak in Darien.”

Lister, like Hunter, united in himself the pathologist and the surgeon, and like him, he worked on the lines of Harvey, and “searched out the secrets of Nature by way of experiment.” The greatest contribution of pathology to surgery is through experimental pathology.

I have already had the honour of bringing before this Association some of the grounds on which we claim Lister as a great pathologist. His work on Inflammation, on the Coagulation of the Blood, and on the action of the nervous system as a powerful factor in pathological processes, has been of direct and inestimable value to surgery apart from his *magnum opus*. I will now indicate some of the ways in which the pathological researches of others have directly influenced surgery. I shall choose three great departments of operative surgery.

The old operation for popliteal aneurism was to tie the vessel on either side of the tumour, cut it open, turn out the clot and allow the wound to heal by suppuration. The mortality was very high, the usual cause of death being secondary hæmorrhage from the proximal ligature cutting its way through the artery. The current pathology of aneurism, founded mainly on some observations of Haller, ascribed aneurism to a weakening of the vessel wall. Hunter came to the conclusion, from clinical and *post-mortem* study, that aneurism was due to disease of the arterial coats. But he was not content to think so. He experimented on the dog, and found that mere weakening of the vessel by removal of portions of its outer walls did not lead to aneurism. He proposed to tie the artery high up where it was healthy, arguing that the current in the artery being thus shut off, pressure in the aneurism would cease, and coagulation would take place; also that the collateral circulation would be sufficient to keep up the vitality of the limb without causing appreciable reflux into the sac. And what of the tumour itself? Instances had been recorded by Valsalva and others of the disappearance of aneurismal tumours which had undergone spontaneous cure, and whether Hunter was aware of this or not, he seems to have trusted to absorption for the removal of the solidified contents of the sac, and we all know the brilliant success that proved his reasoning true.

A more modern instance of an operation conceived in the same spirit is afforded in the first nephrectomy, by Gustav Simon of Heidelberg. A patient came under his care suffering from a ureteral fistula. In the sixties probably no surgeon had yet dreamed of ureteral anastomosis, and removal of the kidney seemed to offer the only chance of cure. But was the operation feasible?

It must have been long known, thanks to morbid anatomy, that one kidney might be destroyed by disease and the patient yet remain healthy. It was a quite different matter to remove a kidney by operation without any opportunity for compensatory changes to take place. But experimental pathology had furnished proof in the hands of Zambecarius that, in the dog, one kidney might be removed, without appreciable injury to health. Simon repeated these experiments. He learned that the chief danger was from peritonitis, that there was not much fear of hæmorrhage, that uræmia was not to be dreaded, that neither albuminuria nor cardiac hypertrophy followed, and that compensatory hypertrophy occurred in the remaining kidney. And so, in 1869, he removed the kidney and succeeded in curing his patient of her distressing malady.

Few things would have amazed and delighted John Hunter more than the recent developments in Brain Surgery, and especially the steps by which the perilous ascent was gained. Diseased brains had been examined since the time of Morgagni, but it was the genius of Broca which first pointed to a *sedes morbi* for aphasia. The same fortunate blending of clinical acumen with exact morbid anatomy enabled Hughlings Jackson to extend our knowledge of the dependence of intercranial diseases on local alteration of structure. But it was necessary to have the irrefutable proofs afforded by the experiments of Fritsch and Hitzig and of Ferrier, before the surgeon could project his chart of cerebral surgery, and sail for the island of Reil.

Now, it is evident that I need not weary you by going into further details to show how pathology, in its various departments of morbid anatomy, etiology, chemical, microscopic and experimental pathology has contributed to the advance of surgery. Every day brings new evidence.

Our understanding of morbid processes has been and is still being enlightened, our power of diagnosis is increased, and our ability to cope with disease and injury is extended.

It is often said that the foundation of surgery is anatomy, and this is true in a sense, for anatomy is the first step to pathology. A knowledge of anatomy is absolutely essential to the study of the human body. But anatomy deals with dead matter, pathology with living, if morbid, activi-

ties. Anatomy is finite, but pathology in the permutations which may occur in anatomical elements is infinite, and it is the realm which the surgeon must explore who wishes to have a firm grasp of the principles of his art. Much has been learned, but more lies waiting discovery. There is always another "peak in Darien" and many surmises to make sure.

"O mare o littus verum secretumque Mορσειον quam multa invenitis quam multa dictatis"

Navigation owes much to the various institutes founded to further its study. Who can tell the value of the early naval schools in Spain, or of the Greenwich Observatory. And so if pathology is to flourish, provision must be made for its study. Every hospital should have its Pathological Institute.

And here we know we shall find ourselves in collision with that section of the public to whom science is uncongenial and medical science an abomination. Pathological study may not always seem interesting or profitable. The ancient mariner would have smiled to think the Tuscan artist, with his optic glass, could be of any benefit to him, and perhaps Galileo was thinking more of descrying new lands, rivers and mountains in the moon than of assisting the sailor; nevertheless, he was helping to lay the foundation of the science which was to make the modern sailor's work possible.

And when the father of our own illustrious Lister, applying his knowledge of the physical and chemical characters of glass, perfected our achromatic microscope, there were practical surgeons who would certainly have failed to see any bearing which his work had on theirs.

When watches were first made in Nuremberg, the only thought in the maker's mind probably was the accurate registration of the passing of time. But Gemma, the Italian, intent on perfecting methods of navigation, seized the idea of the watch at once as a means of computing longitude, and led the way to the use of the chronometer. And the gain is not necessarily all one way, for the practical surgeon, making careful clinical records, may furnish the pathologist with new ideas, and, if one may wrest the words from their original meaning, he,

"Doomed to go in company with Pain,
And Fear and Bloodshed, miserable train,
Turns his necessity to glorious gain,"

and may help to introduce new forces into the healing art.

Here in Canada, while we have had ample experience of the anti-vaccinationist, we have scarcely made the acquaintance of his colleague, the anti-vivisectionist. But the signs of the times indicate that full

scope will soon be given to his vituperative faculty, for in the Universities of McGill and of Toronto pathological research has fairly started on its way.

If we cannot, however, "mollify the spirit of captious contradic-tors," we may perhaps deprive them of an audience by teaching the public that those who devote their time to the investigation of disease, and who may sometimes find it necessary, for the elucidation of the problems submitted to them, to inflict pain on animals, may be lighten-ing the burden of humanity as well as he who directly mitigates its pain, and that their work may be regarded like that of every conscientious surgeon, as a sacred duty, a responsible task carried out "As ever in the great Task-Master's eye."

MENTAL DISTURBANCES DURING THE PUERPERIUM.

BY

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The occurrence of an attack of mental disorder at the time when, under ordinary circumstances, more than the usual amount of happiness reigns in the home, is an event which is most dramatic in its nature. The insanity which develops during the puerperal period manifests itself with startling suddenness, and usually comes like a bolt out of a clear sky. After the tension which all concerned can scarcely help experiencing during the months of pregnancy, it is but natural but that the days succeeding the birth of the child should be glad and joyous, and to the new mother especially the feeling of relief and content is almost inexpressible. When this pleasant mental state suddenly and without warning becomes transformed into one of the acutest psychoses with which we have at any time to deal, we are brought to face with perhaps the most deplorable accident which can possibly happen to any woman; while the shock to family and friends, and the enforced separation of child and mother, combine to make the disaster the most to be dreaded of all conditions which may possibly complicate the puerperal state.

The condition is one, the frequency of which it is impossible to correctly estimate. During the three years ending September 30th, 1901, we admitted to the Nova Scotia Hospital 183 women, of whom 19, or a fraction over 10 per cent., were suffering from insanity which had developed during the six or eight weeks succeeding parturition. But, inasmuch as the curability of this type of cases is so generally recognized, an effort is usually made to keep the patient at home, and, doubtless, many cases occur which are never recorded, and, consequently, our statistics of this form of alienation cannot be even approximately correct. The fact, however, that 10 per cent. of the women who came to us within these three years gave a history of the association of mental disturbance with the puerperal period is sufficient indication that this association is very frequent and deserves the careful attention of the physician.

The term "puerperal insanity" should perhaps be abolished, inasmuch as there is nothing especially characteristic of the form of disturbance manifested, save that it develops within a period arbitrarily determined as from six to eight weeks immediately suc-

ceeding delivery. About two-thirds of the cases present symptoms of mental exaltation, while the remaining third are of the depressive type. The majority of the cases showing exaltation present the psychic symptoms which, according to the older nomenclatures, would class them as mania. In this day, when classifications of mental disease appear with such rapidity as to suggest a Galling gun origin, we have our choice of a large variety of titles which are applicable to the symptom-complex, but in the meantime the general practitioner will probably be satisfied with the older methods and continue to style such cases mania. Of the depressive type, the greater number of cases present the picture of melancholia. Comparatively few cases of insanity occurring during the puerperium are to be classed under such heads as paranoia, parietic dementia, or epileptic, periodic or hysterical insanity. Thus the specific designation "puerperal insanity" is perhaps scarcely warranted, and several recent writers omit reference to such a form of mental disorder. And yet, as Clouston says, "to know that a case is one which has begun after recent childbirth, is to know far more about it, for the treatment and for prognosis, than to know it as mania or melancholia."

The causes of the mental disturbances of the puerperium may be classed under several heads, and, according as causes of one or other of these varieties have predominated in the production of the disorder, so do the symptoms vary. Among the causes, we have first to consider that inherent defect of stability in the nervous tissues which apparently descends from parent to offspring and which we speak of as hereditary predisposition. This is a very potent factor in the causation, although determinant only when reinforced by the mental strain preceding the event of the shock caused by the act of delivery. But heredity is not a necessary feature, and the larger proportion of the cases result from causes over which the physician has control; the accumulation within the system of certain waste products of metabolism; and infection from without, through abrasions of the parturient canal, or, possibly, in some instances, through excoriations of the nipple. In other words, cases of puerperal insanity, so called, are usually the result of either an intoxication, or an infection, or of both combined. The infective element in three cases recorded by Berkley was the streptococcus pyogenes. The infectious cases in particular show the clinical picture which may be regarded as typical of the insanity of this period.

Cases of the manic type usually manifest more or less marked insomnia as the first symptom. Perhaps there may be a tendency to depression—a dull, anergic condition, in which the patient is disin-

clined to make any effort, and may even complain of a sense of discouragement or foreboding. This gives place within a very few hours to a degree of vivacity which is unusual to the patient. The woman surprises her friends by her bright conversation, her ready command of language, the remarkable activity and accuracy of her memory, her aptness at repartee and the incisiveness of her comments on matters under discussion. All the mental faculties show unusual acuteness. The exhilaration thus shown, however, is unlikely to arouse any suspicion of the real cause. Perhaps attention may be attracted to the motor restlessness or fidgettiness which is likely to be evidenced early in the attack, and this symptom may be the one which determines the friends to summon medical assistance.

Very quickly more characteristic symptoms develop. The eyes sometimes become preternaturally bright, and the patient casts furtive glances about her. She becomes suspicious of her friends, and quickly shows marked aversion to them, and especially to husband and child. The conduct becomes wayward, there is incessant motor activity, hysteric outbreaks are common, the voice becomes harsh and raucous, speech is incoherent, language is often profane and sometimes obscene, sleeplessness is absolute, food is refused, clothing and furniture are destroyed, and impulsive acts are common. Many of these symptoms result from the delusions under which the patient labours—many more are the expression of reaction to hallucinations, of which those involving hearing and sight are most common and sometimes very persistent. With these signs of disturbed mental action, we also find many somatic symptoms. The pulse is rapid, and, at first, full and bounding, the temperature is usually elevated several degrees, there is rapid loss of flesh, the lips and tongue quickly dry, crack, and become covered with sordes, there is usually suppression of the lochial discharge, and often, when the patients intelligence is not too much affected, tenderness over the uterus can be determined.

Sometimes the temperature runs very high, and the condition must really be regarded as septicæmia with delirium. In fact, many of the cases are not really separated from this category, and time alone will clear up the diagnosis in such instances. Recovery from the febrile condition with persistence of the mental excitement, will stamp the case as one of insanity rather than the delirium of fever.

Two features of this manic type of puerperal insanity merit especial attention. One of them is the tendency to impulsive acts. Generally the impulsions are reasonless and aimless, and yet the result may be quite as disastrous as if they had been carefully planned. Thus the

patient may suddenly and without warning violently attack her child or any person near at hand, or may destroy herself in blind obedience to a momentary fancy. The other matter of special import is the aversion to food. This is a very constant symptom, and is usually the result of the delusion that the food is poisoned or tampered with in some way. It is a symptom that should be combatted from the very outset, as it is of the highest importance that nutrition should be maintained, and this can be done only by forced feeding.

The depressive type of cases are not more than half as numerous as the manic type. Regis puts the proportion at 1 in 4. There is nothing of special moment in the symptomatology of these cases. The usual features of melancholia are presented—the dejected look, the lax musculature, the retardation and painfulness of the thought processes, the shrinking, crouching attitude, the desire for solitude, the constant vague fears, the ever dominant distress of mind, remorse, expectation of eternal damnation, utter despair, the fearful hallucinations, the fear of death and yet insistent desire to end life, the accompanying somatic symptoms; hard, brittle hair, harsh, dry skin, paralysis of appetite, obstipation, etc., all these differ in no essential particular in the melancholy following childbirth from the melancholy found under any circumstances.

Of much greater importance, from a practical standpoint, than a discussion of the symptomatology is a consideration of the causation of the mental disturbances associated with the puerperal period, for, as I have already said, many cases depend upon causes which are quite within the control of the physician. In patients with a defective nervous organization any unusual stress is likely to precipitate an attack of insanity, and such patients should be guarded with especial care. Much may undoubtedly be accomplished towards the prevention of mental breakdown even in those most predisposed, and every precaution should be taken to minimize, as much as possible, the stress to which the patient is subjected at this critical period. And unless the nervous organization is unusually liable, there should be no morbid mental condition develop at this time.

I make this statement with due deliberation. It is my firm conviction that many of the cases of insanity which occur during the puerperium are preventable, and that the same means which are indicated in the prevention of other undesirable complications would also prove effective as prophylactic of this disaster.

In the normal individual the stress of the reproductive act is not sufficient to cause insanity. Nevertheless, the stress is very great, and when acting in conjunction with an inherent liability of nervous

organization, or even with a toxic or infectious state independent of nervous instability, very grave consequences may follow.

As Mercier points out, the main contribution of the female to the constitution of the offspring is the *matter* of which the body is composed; the contribution of the male is the *energy* which animated the matter. From the mother the offspring derives its bulk, its mass, the material ingredients of its composition. The female, in giving life to her offspring, parts with a portion of her own. This loss is evidenced by the weakness, prostration, and increased vulnerability to toxic and infective influences which characterize the parturient woman. And when to this unusual demand upon the energy, which cannot but influence the highest nerve regions, we add the emotional state which the arrival of the child inevitably establishes, the sudden transfer of circulatory, nervous and glandular activity from uterus to breast, and the immediate imposition of the duties of motherhood, it is readily seen that the strain to which the nervous system is at this time subjected is very great indeed.

For some years past, however, the feeling has been growing and strengthening that as long as the nutrition of the nervous tissues is not vitiated, there is little danger attendant upon a mere increase of the dissipation of nervous energy. In fact, we are coming to regard the insanities, apart from those due to structural or other inherent defect, as being essentially the manifestation of mal-nutrition of nerve tissues.

Now, what are the possibilities of interference with the normal processes of nutrition during the pregnancy and the puerperal condition? Consider first the conditions which we frequently find towards the end of pregnancy.

Even in cases which are perfectly normal, as far as our knowledge permits us to judge, pregnancy entails disturbances in the general nutrition which may have a wide reaching effect. The unusual determination of blood to the uterus, the increased intra-abdominal pressure, and the demand upon all parts of the system for the nutriment needed by the fetus, all influence more or less profoundly the nutrition of the woman. The mechanical interference with the action of the bowel tends, in many instances, to cause constipation, and this leads to the retention within the system of effete matters which, when reabsorbed into the circulation, have a definitely prejudicial action upon the brain cells. The extraordinarily rapid metabolism going on in the walls of the uterus, and the increased activity of the metabolic processes generally, throw a very unusual strain upon the kidneys, and these organs, as is well known, very often fail to meet the de-

mands made upon them. As outward expression of disordered secretory activity we get the albuminurias, the glycosurias, the lactosurias, the phosphaturias, and various other alterations in the chemical composition of the urine so commonly found during pregnancy. These all mark more or less grave changes in the nutritive processes, and are often an index of an autotoxis resulting from deficient excretion of poisonous waste products.

But while the discovery of these morbid states of urine is of the greatest significance, it is a well recognized fact that we should not depend upon so candid a disclosure of impending mischief. The frequent occurrence of a non-albuminuric eclampsia will instance my meaning—for eclampsia and insanity are both results of poisoning of nerve tissue. The physician should therefore be watchful for certain general symptoms which are indicative of a surplussage of toxic matters in the blood. Such symptoms as headache, gastric disturbances, high vascular tension, and physical and mental lassitude, particularly if associated with any discoverable evidence of failure in function of skin, lungs or liver, as well as of bowels or kidneys, should put the physician upon his guard, and it is by no means necessary that there should be signs of renal inadequacy in order that there should be retention of toxins within the system.

Even in the absence of any retained toxins, according to some excellent authority, the hydræmic condition of the blood may cause such denutrition of nerve cells as to lead to mental disturbance in a not-too-well balanced brain. This is seen in anæmia from any cause. It must be borne in mind, however, that in anæmic states insufficient excretion of urates and of ammonium carbamate is commonly noted. Recent studies go to show that the carbamate of ammonia is intensely irritating to nerve tissue, producing epileptiform convulsions in experimental animals. It is, therefore, quite conceivable that the hydræmic condition so usual in pregnancy may have a defining effect in determining a mental collapse.

A psychosis is a fairly common sequel to an eclamptic attack. A careful analysis of this association was made by Olshausen, who found that in 200 cases of eclampsia mental disturbance followed in 11. The literature afforded him a record of 515 additional eclamptic cases, of which 31 subsequently developed insanity. Thus, in a total of 42 out of 715, or in nearly 6 per cent. of cases of eclampsia, mental symptoms also developed. Is it unreasonable to assume that this connection is more than mere coincident, and that the neurosis and the psychosis have a common cause?

Septic infection, through any of the channels previously mentioned,

plays a part in the etiology of puerperal insanity which does not require any special argument. Mental symptoms, in the shape of delirium, are so frequent an accompaniment of febrile states that everyone has noted the connection. I feel, therefore, that it is unnecessary to deal further with this phase of the problem.

The treatment of the mental disturbance of the puerperium is, of course, preventative and curative. And the measures by which prevention can be accomplished are largely suggested by what I have said with reference to causation. Just those measures which the careful obstetrician adopts to prevent the much dreaded eclampsia are to be regarded as of the greatest service in the prevention of mental breakdown also. So there is additional reason for the exercise of every means which may lessen the production of toxic matters and prevent their accumulation within the system. Careful regulation of diet and exercise is very important, and it must be the aim of all treatment to lessen the strain upon the emunctories as much as possible. It is also very essential to maintain all the emunctories in a state of the highest functional efficiency.

The avoidance of sepsis is of the greatest importance, and every possible precaution should be taken against such a complication. Should any evidence of septic infection become manifest, it should receive immediate treatment according to now well recognized principles.

Systematic effort should also be made to prevent the development of the hydræmic condition which is so usual to the pregnant state. In this we have but to follow the line of treatment which we would adopt in treating this symptom under any circumstances, always being careful to first eliminate any causative factor which it is possible for us to control.

Should our best efforts in the way of prophylaxis prove, unfortunately, to be unavailing, and in spite of such precautionary measures as I have indicated, should mental symptoms assert themselves, we are then obliged to treat one of the most acute forms of mental disturbances with which the physician has to deal. Inasmuch, however, as the aim of my paper is especially to point out the possibility of prevention, I will merely outline the special features to be followed out in treatment.

The intensity of the motor excitement usually demands sedation, but drug treatment must always be employed after due consideration of the physical state in general, and the kidney condition in particular. Very often the hot pack or the full warm bath will prove rapidly effective in quieting the patient and securing sleep. If this is not

successful, the use of drugs may become almost imperative. The most active drug, under ordinary circumstances, is hyoscin hydrobromate, in a dose of gr. 1-120, gr. 1-96 hypodermically, but I would not recommend the use of this drug unless the physician can maintain a close supervision of the patient for at least three hours after its administration. Duboisin sulphate in similar dosage, also, has its advocates, but requires the same caution in its administration. The bromides find a useful place in this class of cases, but they act somewhat slowly and must be given in full doses. No matter what form of sedative is selected, it is important to stop it immediately the need for it ceases to be apparent. Then tonic and reconstructive measures should be adopted.

A most essential part of treatment, perhaps of even greater importance than the securing of sleep, is feeding. The patient usually refuses food, and this must be forced upon her, and administered in very large quantities. When forced feeding is necessary, I much prefer the œsophageal or stomach tube to the nasal tube. The passage of the œsophageal tube is somewhat more difficult than the passage of the nasal tube, but it renders the feeding process more satisfactory and much reduces the danger of the inspiration of food into the lungs. Moreover, the mucous membrane of the œsophagus is not so liable to injury as the nasal mucous membrane.

Of food, milk must form the basis, and should be given liberally. Eggs are also given most advantageously, and, if the kidneys are functioning properly, should be given in quantities which will certainly seem huge to the patient's friends. A dozen a day will be none too many if there be no contraindication. Custards, sago, tapioca, beef juice, etc., should enter largely into the dietary. Always remember the need of adding salt to the foods administered by tube. And remember to begin feeding at the very outset—just as soon as food is refused.

Sometimes flushing the colon with normal saline solution has caused the patient to take food voluntarily, and has obviated the necessity for tube feeding.

The question of home versus hospital treatment is one not easily answered off-hand. It is usually better to separate patient from friends. It is rarely possible to discipline a patient at her own home as the character of her case requires. Moreover, the effect upon other members of the family, especially children, of having a noisy, profane, destructive and altogether incorrigible lunatic in the house is often very bad. However, the usually favourable course of these cases should weigh in favour of home treatment if such objections are not insuperable.

The prognosis is generally good. Probably from 70 to 75 per cent. of cases recover. Sometimes the convalescence is protracted over many months. Most recoveries are established within from three to six months. Reestablishment of menstruation is of the greatest importance in determining the permanence of recovery. Relapses are not very common, but recurrences, if other pregnancies occur, are frequent, and this fact should always be impressed upon patient and husband.

ON THE WORK ACCOMPLISHED BY THE LIVERPOOL
SCHOOL OF TROPICAL MEDICINE AND ITS
EXPEDITIONS TO THE WEST COAST
OF AFRICA.

BY

J. L. TODD, M.D. (McGill).

Although malaria as a distinct disease had been clinically recognized for many centuries, its cause remained unknown until a little more than twenty years ago.

At succeeding periods, far different theories, advancing various factors as causative agents, have been in vogue. Even as long ago as 118 B.C., Varron suggested that the disease might be caused by an infection of minute animals.* Bad air, as the name indicates, swampy miasma, impure water, moulds, infusoria and bacteria have all been blamed; but it was not until so recently as 1880 that Laveran first described the haemamoeba which was soon, though not without great opposition in various centres, recognized as the direct cause of paludism.

Perhaps the most urgent objections to the new theory emanated from the Italian school which directed its attention almost entirely to the bacterial theory, represented by the bacillus of Klebs and Tomassi-Crudell,† at the same time asserting that Laveran's organisms were merely altered red blood corpuscles. Indeed, so late as 1882 did an Italian, Chiavuzzi, describe experimental "Malaria" induced in a rabbit by injection of a specific bacterium, the so-called "*Bacillus Malariae*."

So soon as the truth of Laveran's announcement became recognized, a whole army of workers in all parts of the world was attracted to the new field so opened to them; and knowledge concerning the various clinical types of the disease and their causative parasites was rapidly accumulated. Three distinct species, at least, of the "Plasmodium" were quickly recognized and described, and the meaning of their phenomena of Sporulation and Flagellation was discovered.‡

Up to 1898, however, the mode of infection was unknown. In that year Ross made the discovery—the credit of which is his alone—that a

* De re rustica Lib. 1, cap. 12. Advertandum etiam si qua erunt loca palustria et propter easdem causas, et quod arcescunt, crescunt animalia quedam minuta, quæ non possunt oculi consequi, et per æra intus in corpus per os, ac nares perveniunt atque efficiunt difficiles morbos.

† Archiv. f. exp. Path. v. Phar., 11, 1879.

‡ Canadians will be pleased to remember the work of three McGill men on this subject, of Osler, Hewetson and Lafleur.

mosquito of a certain sort, *Anopheles*, was an intermediate and apparently a necessary host in the life history of the plasmodium.

He demonstrated that a very important cycle of its development took place in the body of the insect, and that, with the insect's bite, active disease-producing sporozoites were injected, together with the secretion of the veneno-salivary gland, into the definitive host, man.

Very shortly after publishing his epoch-making results, Major Ross came to England and the Liverpool School of Tropical Medicine. Through the generosity of merchants interested in the West Coast, funds were supplied enabling the school to initiate a series of enquiries into the sanitary conditions obtaining in West Africa, chiefly with the view of ascertaining the feasibility of destroying *Anopheles*, at all events near European settlements, and so preventing malaria; naturally this was the most obvious practical application of Ross's discovery. It must be remembered that at this time very little was known concerning the habitat, and habits, of *Anopheles*, and that it was not possible to give an intelligent opinion, based on facts, concerning the possibility of exterminating mosquitoes in any given locality.

Since 1898 expeditions have been sent out by the Liverpool School to all the British possessions on the West Coast from Bathurst to Old Calabar, and as far inland as Northern Nigeria.

Especially does the extraordinary amount and importance of the varied knowledge thus collected command admiration when the conditions under which the members of the expeditions worked are considered. The climate, their fewness, and the merely topographical work necessary, all combined to make their task a difficult and a tedious one.

The first expeditions to Sierra Leone, Accra, and Lagos directed their energies chiefly towards the elucidation of the life history of *Anopheles* and the discovery of an adequate means of destroying them at any of their stages of development as egg, larva or pupa.

Later expeditions, besides extending this work, have shown once more that native children are almost always hosts of parasites actively circulating in the peripheral blood, and that they thus constitute an ever present dangerous source of infection to Europeans.

As a result of this work two main prophylactic measures have been recommended to the Colonial Governments:—first, the segregation of Europeans at a distance of at least half a mile from native dwellings; and second, perfect surface drainage in the neighbourhood of European compounds.

The first and probably more important measure—since, from the nature of the country, it is often manifestly impossible to thoroughly

remove all surface collections of water—has the, at present, almost insurmountable objections of expense and inconvenience. Ultimately, however, it is still hoped that by gradual changes ideal conditions may be obtained in all the old-established stations and that new ones will be designed solely on this plan.

The second remedy is being most energetically enforced at both Lagos and Sierra Leone by the local Governments. Old pots, pans, bottles, anything capable of containing rain-water in fact, in which mosquitoes might breed, are removed from untidy streets and compounds. Road-side gutters with stagnant pools have been properly graded, puddles filled up, beds of streams levelled, and in short, standing water of any sort, unless adequately protected by gratings, has been wherever possible removed.

Although it is somewhat premature as yet to judge of the results, a recent report* shows a most gratifying decrease in the number of mosquitoes and apparently in the incidence of cases of malaria.

The results obtained by the "Mosquito Crusades" in Havana and the United States certainly demonstrate most strikingly that it is possible to almost absolutely prevent the breeding of mosquitoes in a definite area, provided sufficient individual care is used.

But it must be remembered that it is far easier to bring such an operation, requiring as it does the earnest co-operation of private persons, to a successful conclusion in the States or even Cuba, where the people are fairly intelligent and have, at least, no marked distaste to ordinary sanitary methods, than in a native African quarter, where the "street" becomes every man's slop-bucket.

Besides these two main rules, the School has advised further important changes in the ordinary life of Europeans on the coast based largely on customs which have been found necessary to the Englishman's well-being in India. It is an extraordinary fact that while the Anglo-Indian saves himself much discomfort and sometimes preserves his health by means of punkhas, airy rooms, gymkhanas and properly arranged mosquito nettings, the West African is often extremely negligent in such matters, and so frequently unnecessarily adds to the country's already sufficiently ghastly reputation.

Through the influence of employers at home and officials in the colonies, it is hoped that all these recommendations will be carried out, and that a healthier state of affairs will soon appear.

In considering these methods, it may seem strange to some that the rather short distance of half a mile should have been mentioned as the

* Progress Report : Thompson Yates Laboratory Reports, 1902.

segregation limit, and that none of the generally vaunted culicides, particularly praised by the Italians, have been recommended. It has been proved, not once but many times, that the usual flight of *Anopheles* under ordinary circumstances does not exceed a few hundred yards. In the work of extermination of mosquitoes besides the general drainage methods mentioned above, kerosene and other culicides have been used, but none have proved altogether satisfactory from lack of either permanency or reliability.

At present, with our fairly perfect knowledge concerning the life history of the various hæmamoebæ causing malaria (the chief cause of death among white men in Africa), more attention is being directed towards the animal parasites more peculiar to the negro.

Some time ago Patrick Manson remarked that "the reign of the bacteria has reached its height; that of the Protozoa is just commencing."*

This, indeed, seems to be the cause, for almost weekly in the various journals articles appear attributing pathogenic action to all sorts of animal parasites. It is scarcely necessary to more than mention the various "cancer organisms" described by a multitude of writers, the leukaemia Protozoon of Löwit,† Dutton's Trypanosoma,‡ or the lately described Pani Ghao§ to excite a wonder whether the animal parasites may not possess important, hitherto unsuspected, pathogenic potentialities.

It should at once be pointed out what peculiarly favourable conditions West Africa offers, by reason of its moist hot climate,|| for the development of the many animal parasites peculiar to man, or harboured by him in common with other vertebrates. Some of these parasites, as the hæmamoebæ of Malaria and Texas Cattle Fever, the filariæ of men and birds, and the Trypanosomata, require biting insects, such as mosquitoes, ticks or flies, as intermediary hosts; others, more particularly the intestinal parasites, pass through an extra corporeal stage in the warm, excreta-contaminated, African mud.

Some of the latter, for instance, *Anguillula intestinalis*, go through a distinct extra-corporeal alternation of generation before elaborating embryos capable of again entering a host;* while still other Nematodes, and many Cestodes, remain in a dormant resting stage until fortuitously ingested by either a primary or secondary host.

* Les Hæmatozoaires du Paludisme; par Neveu-Lemaire, 1801. Page 1. Paris.

† Centralbt f. Bakt., 1898, Vol. XXIII.

‡ Thompson Yates Lab. Reports, 1902.

§ British Med. Jour., Jan. 25, 1902.

|| Parts of the West Coast have two rainy seasons annually.

* Notes sur les embryom de Strongyloides Intestinalis. Thompson Yates Lab. Reports. Vol. V. Part II. 1902.

Some recent observations, both in laboratory and clinical work, have made it almost certain that the power of entering the alimentary canal of their host by first penetrating the skin is possessed by at least one dangerous human parasite (the *Anchylostomum duodenale*, *Uncinaria duod.*), which causes a very fatal anæmia variously recognized as Egyptian chlorosis or bricklayer's anæmia.† It has been asserted that a somewhat similar power is possessed by the Guinea worm, one of the Filariæ.

Enough has been said to show that if the West African towns can be raised to a standard of municipal hygiene which will require the removal of all stagnant water or decaying animal matter, which probably provide breeding places for disease-carrying insects, and will insist on the proper disposal of excreta in latrines, so preventing the ground in the neighbourhood of native lines from becoming a veritable culture medium for all manner of intestinal parasites, a very considerable reduction in the incidence of disease will follow, and the work of the Liverpool School will not have been altogether fruitless.

Thompson-Yates Laboratories, July, 1902.

† Loos, *Centralbl. für Bakt.*, 1898, s. 441, u. 483; *Centralbl. für Bakt.*, 1901, s. 733.

CASE REPORTS.

RY

W. S. ENGLAND, M.D.,
Surgeon to the Winnipeg General Hospital.

Tuberculous Tumour, Involving Ileum and Cæcum.

I was called to see the patient, J.R., married, female, aged 35 years, in consultation, on the 19th of June, 1901, and found her complaining of a tumor in the right iliac region, also of attacks of pain in the abdomen with vomiting and dyspepsia.

The patient had always been a strong, healthy woman, previous to the beginning of these symptoms, some eighteen months ago. Her surroundings were good, living as she had been, on a large wheat farm. Only one cow was kept on the farm and it is said to be a healthy animal. There is nothing noteworthy in regard to her menstrual history. She gave birth to a premature child three years ago.

The family history is negative, there being no neurotic, tubercular, nor cancerous predisposition in her ancestors. Her husband is an active, healthy man.

About eighteen months ago, the patient began to be troubled with various symptoms of indigestion, such as flatulence, sour eructations, irregular bowels, pain in the epigastrium and vomiting. The vomitus consisted of copious quantities of fermented food and mucus. These symptoms gradually increased in severity and she lost flesh and at times was confined to her bed with nausea and vomiting. The abdomen became very distended at times, especially before these attacks of vomiting, which attacks also gradually became more frequent and violent.

Thirteen months ago (May 1900) the patient accidentally felt a lump in the right iliac region, when supporting her sides during the violent retching and vomiting accompanying one of these attacks. The lump was then said to have been nearly its present size, feeling about as large as a turkey's egg. There is no distinct history of any symptoms simulating an attack of acute appendicitis. She continued to lose flesh and suffer from the same symptoms, together with some constipation until February, 1901, when she submitted to an operation to secure relief.

Two incisions, each three inches long, were made, one in the linea alba below the umbilicus and the other directly over the mass. The

physicians, however, did not attempt to remove the growth, but sutured up both wounds and the patient informs me that their diagnosis was cancer. However, later on, they advised the patient to seek further surgical interference in an eastern city, where there were better conveniences to cope with a major operative case, and the patient fell into my hands, through the kindness of Dr. Montgomery.

The patient is tall and slight, weighing about 103 pounds, her face is thin and somewhat anxious looking, but not cachectic in appearance, appetite poor, tongue slightly coated, bowels constipated, but yet easily regulated. The abdomen is rather flat and there is no distension of the stomach.

The hepatic dulness is normal. A hard even mass about the dimensions of a medium sized lemon can be easily mapped out in the right iliac region. This lump is movable to a limited degree and the patient only complains of slight tenderness on pressure, over and around it.

No enlarged lymphatic glands can be felt beneath the skin in the axillæ, groins or neck. Nothing abnormal can be felt per rectum or vaginum.

The heart, lungs, spleen and genito-urinary organs are, apparently, normal.

The temperature is 98 degrees F, pulse 72, respirations 20. We were unable to come to a definite diagnosis, but doubted the presence of cancer, owing to the slow growth and long duration of the trouble, without it having produced more evidence of its malignancy.

The patient having been prepared and everything at hand that might be required to deal with any condition found, we proceeded to operate on the 22nd of June, 1901. An incision was made through the old scar over the mass and extending two inches upwards, down through the abdominal parietes. The peritoneum was found connected to the underlying mass by bands, and the omentum was adherent at places. These were separated. The omentum ligated off and the growth exposed, when it was found to be one solid mass involving the appendix, cæcum; three or four inches of the ascending colon and several inches of the ileum. A small secondary growth was found encircling the lumen of the ileum, some twelve inches away from the primary growth. Also all the lymphatic glands in the mesentery, connected to that part of the bowel and extending down to its spinal attachment, were found enlarged and hard.

I proceeded to isolate the growth and ligated off the peritoneal attachments of the appendix, cæcum and colon for a few inches above its limits. I also ligated off all the affected mesentery down to its

spinal anchorage, and separated it for some inches beyond the secondary growth in the ileum. The colon and ileum have been temporarily ligated by tapes were cut across and all the involved tissue removed. The ends of the bowel were thoroughly cleansed and then brought together by a Murphy's button. A row of fine silk suture was placed around the button between the two ends to reinforce it. The tapes were cut and removed. The divided peritoneum in the right lumbar region was sewed together over the kidney and the cut mesentery was brought together. The parts were cleaned and wiped dry and the parietes, sutured up, layer by layer.

The patient made an uninterrupted recovery. She suffered every little pain, only having had $\frac{1}{2}$ grain of morphine the night after the operation. She only vomited a very little and did not require a purgative, the bowels moving naturally on the fifth day following the operation. The bowels continued to move regularly until July 2nd, when she had a slight foetid diarrhoea and on the 3rd, a skyograph was taken and the button was seen in the sigmoid flexure (11th day).

This continued until the button was expelled on the 14th day, after which time the bowels became regular and the foetor disappeared. A considerable indefinite area of inflammatory tissue could be felt in the right iliac and lumbar regions, ten days after the operation, but this had considerably lessened in amount before the patient went home.

After the operation the pulse varied from 80 to 110, respirations 20; the temperature ranged between $98\frac{1}{2}$ to 100 degrees F, until the button was passed, after which time it fell to 98 degrees F and remained normal or subnormal.

The patient was fed by nutritive enemata for some days, but on the 3rd day after the operation she took nourishment in small quantities by the mouth without pain or discomfort following. Soon she developed a good appetite and gained in flesh and spirits, leaving the hospital still a little weak, but feeling well, on July 9th, seventeen days after the operation.

Dr. Bell has kindly furnished me with the following pathological report:—

“The specimen comprises 18 inches of ileum and 4 of large intestine. Exactly at the junction of the two there is an irregular mass about the bulk of a tennis ball. The mesenteric glands immediately tributary to the part are enlarged to the size of hazel nuts, and matted together. The short, nearly three inch, appendix is three times its normal size, being much thickened and largely involved in the mass.

Some 9 inches up the small intestine there are 4 or 5 small grey

nodules found in its wall, being arranged in the direction of the circumference of the bowel.

The ileo-cæcal opening is found to be very much contracted, it only admitting a small sized lead pencil.

Incision into the lumen of the bowel showed the mass to be densely fibrous with areas of necrosis scattered throughout, and a microscopical examination confirmed the diagnosis of tuberculosis.

There were abundant giant cells with caseation and fibrous proliferation.

The mucous membrane was not ulcerated.

The mass on section from the peritoneum to the mucous membrane was an inch in depth, the inflammatory thickening being most marked opposite the mesentery.

The appendix seemed to be pretty uniformly infiltrated throughout and the only secondary deposits in the intestine wall were those described as occurring some 9 inches from the valve.

The lymph glands were caseous in their centres."

REMARKS.—The above condition is so rare that Frederick Treves, in considering tuberculous lesions of the bowels in his monogram on "Intestinal Obstruction," only cites one similar case, though less extensive, which was reported by Nothnagel in 1896. His case was first believed to be cancerous but proved to be tuberculous and lived three weeks after the operation for its excision.

Local Cerebritis of the First and Second Temporo-Sphenoidal Convulsions—Jacksonian Epilepsy—Aphasia— Trepined—Improved.

The patient was kindly referred to me by Dr. W. H. Brothers, who had kept the child under observation for the last three years. The child has been a great care to his mother, who has not been able to do much else but mind him, since he was a year and a half old.

When about eight months old—November 1896—the patient's mother noticed a thin watery discharge coming from the left ear, which continued about two weeks.

In January 1897, when about ten months old, he had a convulsion which lasted about three minutes, the convulsive movements being general. The child had a second similar convulsion in March, 1897, and a third in May, 1897.

In July 1897, the patient had three convulsions in one day. These were similar in character, but more severe. From July to December 1897, similar convulsions occurred, but they were more frequent, the patient having one or two a week. At times the child would

momentarily lose consciousness and suddenly fall down without having any convulsive movements.

The mother states that during this time there was no discharge from the ear, but that the child seemed to suffer from pain in the left ear before taking a convulsion.

During January, February and the first week of March, 1898, the convulsions became very frequent, the child sometimes having as many as ten convulsions in a day; but the convulsive movements were unilateral and confined to the right side of the face, the right leg and arm. The child always lost consciousness with these convulsions, but they were only of short duration, and he did not appear to suffer before these attacks.

The patient had had no convulsions since March 1898, but since that time has been forcibly grinding his teeth at very frequent intervals, both night and day, and has been very restless and irritable.

Following the last convulsion was a free purulent discharge from the left ear, which lasted about a week, when it lessened, but in about two months it re-appeared. This free purulent discharge continued in this way until March 1899, since which time the ear has discharged pus at less frequent intervals until January 1901. There has been no discharge since this date.

In February 1898, after the convulsions had been very frequent and severe for three weeks there was marked paresis of the right arm and leg. This gradually improved, but the child continued to have an unsteady and shuffling gait of the right leg until December 1900.

The child was very bright and active when a year and a half old, and understood what was said to him. He could say many words, such as "Mamma," "Papa," "Pussy," etc. When asked what any familiar animal said he would imitate its sound. He could say, "I won't; don't lie down," etc.

The boy was in very poor health and did not thrive much until two years ago, since which time he has grown very rapidly. During this time, also, he has been most unmanageable, when awake being constantly on the run and into all sorts of mischief, keeping one constantly employed to control him. His mother says he understood what he was doing, and largely what was said to him, but would only mind when he felt so disposed.

In November 1900, the right patellar reflex was exaggerated; the left was normal.

There is no neurotic history in the family. The father and mother are living and healthy. His brothers and sisters are all bright and active, and able to talk. The child's general condition is good. He

is rather tall and slight of build ; appetite good ; bowels regular. None of the thoracic or abdominal organs show any evidence of disease. Pulse 96. Temperature 98° F.

PRESENT CONDITION.

The child is very restless and irritable, frequently grinding his teeth. His gait at present seems steady, and he is constantly on the go. The right patellar reflex is absent; the other reflexes are apparently normal. The child looks sensible and bright. His first move on entering the ward is to secure my watch, which he immediately puts to his good ear, and looking up says: "tic-tic" repeatedly. When the watch is placed against his left ear he will hold it there for a short time, but soon changes it to the right ear and again says "tic-tic." The left middle ear is practically gone. His vision is apparently good, but the discs are pale. There is no optic neuritis.

He makes loud grunting and mumbling sounds, but his mother is unable to understand him. There is no paralysis of the face or tongue. He understands largely what is said to him, but does not always obey. He understands the use of common articles, which he has been accustomed to. *e.g.*, I gave him a hair brush and he immediately began brushing his head, but suddenly stopped as it had been shaven. He took the curling tongs and began curling his mother's hair. He frequently takes a club to one of his brothers if he is annoyed.

His perception is very acute. When at home he was accustomed to coal oil lamps for light. These he frequently lighted himself. The first evening when in the hospital he saw his mother turn on the electric light over the bed. In an instant he was on top of the bed, and turned on and off the light a few times, then left it apparently satisfied, and smiled.

He readily manifests his likes and dislikes.

When he is hurt he cries, and when pleased he laughs or smiles. But he can not talk or name objects although able to make sounds.

The parents are anxious for an operation to see if anything can be done to relieve the child's restlessness, even though no improvement in speech should follow.

The lesion was considered to be one involving the 2nd or 3rd left temporo-sphenoidal lobe, and perhaps an old encysted abscess following the otitis media.

The patient having been previously prepared on February 25th, 1901, I proceeded to reflect a flap of the scalp and cranium, by knife and chisel, downwards, to expose the left temporo-sphenoidal lobe as

well as the lower part of the supra-marginal and angular gyrus. On reflecting the scalp downwards a large plexus of veins was found between it and the pericranium running downwards in front of the left ear. A small trephine hole was made five-eighths of an inch above and a little behind the external auditory meatus. There was no bleeding from the diploë. A horse-shoe-shaped flap of bone was chiselled around from here, extending upwards, forwards, then downwards. No blood oozed from the bone excepting at the most superior part in the parietal bone where a little flow came from one point. The bone was found about 3-16th of an inch thick, and it was compact throughout, the diploë being practically absent or only rudimentary. The bone appeared very fibrous in structure, and readily tore on prying up the edge with the chisel. The flap of bone was broken over and turned down. On incising the dura mater, which was decidedly thickened, no hæmorrhage occurred when cutting the large branches of the middle meningeal artery across.

The brain completely filled the cranium, and pulsation in the supra-marginal, angular gyrus and first temporo-sphenoidal convolutions was very strong.

Pulsation in the second temporo-sphenoidal lobe towards the front part was less forcible though present and still less marked in the third. The apex of the third temporo-sphenoidal lobe, especially on its undersurface, seemed soft to the touch and did not pulsate. The anterior surface of the petrous bone seemed abnormally uneven and elevated.

The second and third temporo-sphenoidal convolutions were explored in many places, and the first temporo-sphenoidal, angular gyrus and supra-marginal convolutions once each. No fluid escaped from the interior of the brain, excepting a little blood-stained serum.

A silk-worm gut drain was placed beneath the apex of the temporo-sphenoidal lobe and brought out at the trephine hole. The dura was sutured with cat-gut, and strips of bone having been broken off the upper and front part of the reflected bone it was replaced in position. A similar drain, also, having been inserted between it and the dura, the scalp wound was brought together by silk-worm gut, and an antiseptic dressing applied.

The patient made an uninterrupted recovery as far as the operation was concerned.

The pulse ranged between 90 and 100; the temperature on one occasion reached 100 2-5° F., but generally it was 98° to 99° F.; the respirations were 24 per minute.

The wound was dressed on the 26th February, when a few strands

of the drain were removed. It was again dressed March 2nd, when more strands of the drains were removed. March 7th all the sutures were removed and the remainder of the drains, the scalp being firmly united excepting at the drainage opening. The last dressing was applied this date.

Since the operation the child has taken his food well and shows no evidence of damage from the operation. He appears quieter and does not grind his teeth so much, otherwise there is no improvement.

Remarks:—In all probability the pathological changes which have been going on in this case since the child was less than two years old are of the following nature:

A septic otitis media with infection of the dura mater in front of the petrous bone; chronic meningitis in this region, and extending around for about two inches, with occlusion of the middle meningeal artery close to the foramen spinosum. The undeveloped bones of the cranium in this region having lost their blood supply through this artery the *diplœ* was not developed, but remained rudimentary. The bone developed principally from the pericranium and compensatory veins formed between it and the scalp. The inflammation extended through the dura and a localized cerebritis of the anterior part of the third temporo-sphenoidal lobe followed, which cerebritis also implicated the front part of the second temporo-sphenoidal lobe, but to a much less degree.

This resulted in a non-development of this area of the brain which presides over the power of making words or naming objects.

Whether the relief of intracranial pressure and an alteration in the circulation over this area from the drainage, and removal of bone, will be of any decided benefit to the child or not it is impossible to say at present. The child is to be referred to me again in six months, when, if there is no decided improvement, I shall trephine and explore the anterior surface of the petrous bone, and the tip and undersurface of the third temporo-sphenoidal lobe from in front and below.

RETROSPECT
OF
CURRENT LITERATURE.

Surgery.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

Extirpation of the Prostate.

FREYER, P. J., "Total Extirpation of the Prostate for Radical Cure of Enlargement of the Organ." *Brit. Med. Jour.*, July 20, '01, Feb. 1, and July 26, '02.

In the removal of the prostate by Mr. Freyer's method, the organ is enucleated in its capsule from the surrounding sheath, and then stripped off the urethra, which, with its enveloping tissues is left intact. The author describes the true capsule of the gland as being altogether separate and different from the sheath, which is formed from the pelvic fascia, numerous connecting bands passing between the two. In the space between these two capsules lies the prostate plexus of veins, particularly above and at the sides of the gland; these veins in subjects of enlarged prostate are frequently of enormous size. The larger branches of arteries also lie between the true capsule and the sheath, small branches passing from them into the gland substance.

The operation consists in opening the bladder suprapubically catching up the mucous membrane with forceps, incising it, and the enucleation of the gland by the finger above, no instruments being used. A finger in the rectum pushes the gland forward, bringing it more within reach of the finger, and eventually, when the gland is detached from the sheath, pushes it into the cavity of the bladder. As the lateral lobes of the prostate enlarge they bulge out and have a tendency to become more defined and isolated, each being contained in its own capsule. They separate and become more or less loose from the commissures, and tend to return to the separate condition found in early foetal life. The urethra and ejaculatory ducts are left intact when the lobes come away separately. When the lobes are

not detached from each other along the inferior commissure, the author cannot say as to whether the ducts remain intact or are torn across.

In enucleating the prostate out of its sheath, the fibrous bands that pass between the sheath and the capsule are torn through, but the prostatic plexus of veins and the large arteries are left behind. This accounts for the trifling hæmorrhage which takes place in this operation, as compared with the severe bleeding which follows other methods of total or partial removal of the gland. The large cavity left after enucleation rapidly contracts, and after irrigation with hot lotion to control bleeding, the finger in the bladder scarcely detects any cavity whatever. One of the remarkable features of this operation is the complete restoration of the power of voluntary micturition after habitual catheterism may have been employed for lengthened periods.

Mr. Freyer has operated by this method in fourteen cases. The patients' ages varied between 52 and 76. The majority were old cases with all the complications usually found in those who have had to use the catheter for years. One patient died on the 22nd day after operation, of acute mania; the remaining thirteen made excellent recoveries, are able to retain their urine and pass it freely without the use of a catheter. In three cases the author could not detach the gland from the urethra, and, consequently, was obliged to tear this structure across. Although these cases suffered severely from shock, they made good recoveries and had complete control of the bladder.

The Surgical Treatment of Ascites.

MONTGOMERY, W. P., "On the Surgical Treatment of Ascites."
Medical Chronicle, April, 1902.

When, in cases of cirrhosis of the liver, the ascites has reached such a degree that tapping is necessary, the patient seldom survives the operation for any length of time, and but rarely will removal of the fluid be called for a second or third time, the patient succumbing to the primary disease before the abdomen has again become distended with fluid. Dr. Hale White is of opinion that any patient who survives to have several tapplings performed may possibly have cirrhosis of the liver, but that other complications are present as well. He cites ten cases which were considered to be cirrhotic and in which many tapplings were done. In nine of these chronic peritonitis and perihepatitis were found post mortem. In such cases we may infer that the formation of adhesions has assisted in the development of a temporarily curative collateral circulation. Examination post mortem

of cases of cirrhosis which have survived tapping for any length of time shows, either that the viscera (abdominal) are connected with the parieties of vascular adhesions, or that the normal anastomoses between the visceral and parietal circulations are very markedly increased in capacity.

These vascular communications are:—

(1.) The subperitoneal hepatic plexus between the folds of the broad ligament connecting the portal with the phrenic and azygos veins.

(2.) The round ligament vein connecting the left portal with the epigastric.

(3.) The coronary veins anastomosing with those of the œsophageal plexus.

(4.) The inferior mesenteric communicating with the middle and inferior hæmorrhoidal plexus of the iliac.

Talma has published the results of autopsy in three cases of cirrhosis in which ascites had been present but had disappeared before death. Each of these showed extreme enlargement of the collateral circulation, the vein of the round ligament in one case being as thick as the little finger. Any operative measures in these cases have been opposed by those who attribute the ascites to a general toxæmia resulting from the inability of the diseased liver to absorb and destroy alimentary toxines, and, consequently, that any enlargement in the anastomotic circulation would do actual harm by increasing the facilities for the direct passage of these poisons into the general circulation. Against this view it may be urged that, even if the ascites be of toxic origin, the operation may be of benefit by relieving the portal circulation and so allowing the liver to deal more efficiently with the blood passing through it. Again, if the ascites were due to a general toxæmia, one would expect to find other serous membranes involved.

The operation consists in aiding the development of the collateral circulation through the agency of peritoneal adhesions. The omentum may be sutured:—(a) to the parietal peritoneum alone; (b) it may be fixed under the skin of the abdominal wall; (c) it may be sutured between the liver and the diaphragm; or (d) the parietal peritoneum may be separated from the muscles around the abdominal incision and theomentum grafted into the prepared surface. The incision is made preferably above the umbilicus, so as to avoid wounding the vein of the round ligament.

The author reports two cases. The first was that of a woman aged 50 years who had noticed increasing enlargement of the abdomen during eight months, and who had been tapped three months pre-

vously. The fluid soon reaccumulated. A four-inch incision was made in the right semilunar line and the liver exposed. The organ was enlarged, congested, and had a rough granular surface. The omentum was tacked to the peritoneum on either side of the incision, after the surface of the liver had been rubbed with a sponge, and was then folded up between the liver and diaphragm, and fixed to the liver capsule by a single suture. One month after operation there seemed to be some accumulation of fluid, but a steady diminution then began and six months afterwards there was no trace of ascites.

The second case was that of a man aged twenty-six years, whose disease was looked upon as being chronic peritonitis and possibly cirrhosis. He had been tapped on 42 occasions. An operation similar to the preceding one was performed. Since then the patient has suffered a good deal from bronchitis and still requires tapping. The abdomen fills up much more slowly than it did before the operation.

The author has collected sixteen cases which were available for treatment, and which added to the series collected by Packard and Lecoure give a total of thirty-eight cases with the following results:—

Deaths, 10, or 26.3 per cent.

Unimproved, 9, or 23.6 per cent.

Improved, 4, or 10.5 per cent.

Recovered, 15, or 39.5 per cent.

As to the cases suitable for operation, opinions differ. Talma states that the cirrhosis must be primary and not secondary to a condition such as chronic peritonitis with serous effusion. Dr. Hale White, on the other hand, is of the opinion that it is in these very cases of chronic peritonitis with cirrhosis that the best results are to be obtained. As a matter of practice, it is difficult to distinguish between pure cirrhosis and cirrhosis with chronic peritonitis.

E. J. Semple.

Obstetrics.

UNDER THE CHARGE OF WILLIAM GARDNER.

The Ophthalmias of the Newly-born and their Prophylaxis.

PINARD, "The Ophthalmias of the Newly Born and their Prophylaxis." *Annales de Gynéc et d'Obstel.*, Jan., 1902.

The author states that the statistics of all lands still show that purulent conjunctivitis is the most frequent cause of blindness. Bacteriological research has materially increased our knowledge of the ophthalmias of the new-born. Pinard holds that while the gonococcus is the direct cause of infection in the majority of cases, other pathogenic agents may produce conjunctivitis, such as the streptococcus, Loeffler's bacillus, staphylococcus, pneumococcus, etc. Therefore he prefers to speak of purulent ophthalmias of the new-born instead of purulent ophthalmia of the new-born.

According to Fränkel the order of frequency in the ophthalmias of the new-born is gonococcus, pneumococcus, the bacillus of Koch and Weeks, the diplobacillus of Morax and Axenfeld, the bacillus coli, the bacillus of diphtheria, a variety of diplococcus intracellularis, the meningococcus intracellularis. He considers that the conjunctiva of the newly born shows a marked predisposition to infective inflammation.

He distinguishes between primitive ophthalmia and secondary ophthalmia. Primitive ophthalmia arises from infection at the time of birth or immediately before. Secondary ophthalmia develops between the sixth and twelfth days or even later, and is due to the environment and carelessness of the nurse. The ideal prophylaxis is to absolutely prevent the infective micro-organisms from reaching the child's eyes before, during, or after its birth. Unfortunately this ideal is not always attainable, and therefore a certain percentage of ophthalmia will probably continue to present itself.

The problem resolves itself into the complete disinfection of the genital canal of the mother before labour, and the disinfection of the eyes of the infant at birth. This was first advanced by Crédé, in 1879. He found that in cases of women infected with vaginitis, antiseptic douching before labour diminished the number of cases of ophthalmia but slightly. Therefore a two per cent. solution of silver nitrate is dropped into the eyes of the new-born in addition to the prophylaxis.

lactic douching of the mother. Under this treatment the number of cases of ophthalmia has been reduced by one-half.

Schröder obtained good results by using a 1 to 5,000 solution of sublimate in place of silver nitrate. Koltenhoch and Abfeld have abandoned antiseptic instillations, employing sterile water or alcohol for this purpose. Budin, at the Clinique Tarnier, now uses weak solutions of nitrate of silver. Champetier de Ribes employs a 1 or 2 per cent. solution of silver nitrate followed by a wash of weak permanganate of potash. Between 1896 and 1898 his percentage of ophthalmia cases varied between 0.70 and 1.68.

The author of the Clinique Baudeloque has made use of nitrate of silver, biniodide of mercury, 1-4,000, lemon juice, citric acid 5 per cent., permanganate of potash, and recently a solution of aniodol. In ten years he had 131 cases of primary ophthalmia and 91 cases of secondary ophthalmia. He thus concludes that the employment of different antiseptic methods directed towards asepsis of the genital canal at labour, combined with asepsis of the conjunctival sacs of the infant, at birth and during the three weeks that follow, have diminished the number of purulent ophthalmias considerably. As he puts it, to paint a picture requires more than a canvas, paint and brushes; so also it requires more than antiseptic agents to produce antiseptis. Thus, whatever the antiseptic agent employed, cases of ophthalmia still occur and will continue to do so.

The curative treatment, to give good results, must be applied early. Since 1894 he has employed irrigations of permanganate of potash solution for this purpose. Pinard considers that curative treatment should always be carried out under the supervision of ophthalmic surgeons, and advocates that every large maternity should have at least one such specialist on its staff, charged with the direction of the curative treatment of purulent ophthalmias and the teaching of this branch to students and nurses.

Pregnancy after Removal of the Ovaries.

DORAN, ALBON. "Pregnancy after Removal of both Ovaries for Cystic Tumour." *Jour. of Obstet. and Gyn. of the British Empire*, Vol. II., No. 1.

The writer removed a cystic tumour of the right ovary fourteen years after a similar growth on the left side had been removed. The patient not only menstruated regularly after the second ovariectomy, but bore a child to term two years after the second operation. The operator at the second operation found the stump of the ovary, removed fourteen years before, reduced to a small tubercle.

He concludes that he must have failed to include the tube in his ligature at the base of the tumour of the second operation, and that some ovarian tissue must have been left behind.

He collected nine other cases where pregnancy is reported to have followed double ovariectomy. In his analysis of the reports of these cases he shows the possibility that in all portions of ovarian tissue may have been left behind. He also makes a study of cases of pregnancy following ligature, and even section of the Fallopian tubes, and concludes that in these cases the ligature loosens, or else it ulcerates through the tube, which heals behind it without complete stricture of its canal.

Thyroid Extract in Eclampsia.

NICHOLSON, H. OLIPHANT. "On the use of Thyroid Extract in Puerperal Eclampsia and in the Pre-Eclamptic State." *Ibid.*"

Nicholson has advanced the view that "inadequacy of the maternal thyroid system" is related in some way to the occurrence of puerperal eclampsia. He cites the well-known fact that in normal pregnancy the thyroid gland is enlarged, and states (without giving authority) that the enlargement can be diminished or prevented altogether by the administration of thyroid extract.

It being accepted that eclampsia is the result of auto-intoxication, this condition being the result of incomplete metabolism with subsequent imperfect excretion, he considers that iodothyrim is essential to the efficient working of all of the various metabolic organs of the body. Its exhibition is followed by marked stimulation of the metabolic processes and a striking increase in the excretion of urea. In brief, the writer's view is that eclampsia is the result of the arrest of the metabolism of nitrogenous substances at a stage when those are highly toxic due to a deficiency of iodothyrim. He considers that the symptoms of eclampsia resemble those of complete experimental athyroidia. Iodothyrim, he suggests, exerts some specific action on the kidney, that the presence favours the formation of urea, a most powerful diuretic, and that the vasodilatation produced by iodothyrim tends to promote renal activity.

Thus the thyroid and suprarenal secretions, as far as their action upon the arterial calibre is concerned, are antagonistic. In all conditions of athyroidism the arteries are found to be unduly contracted. He has suggested that the unopposed action of the suprarenal secretion, bringing about spasm of the renal vessels, might be one of the factors which lead to the arrest of the renal secretion so common in eclamptics.

Thus he considers "that the degree of the toxæmia of pregnancy

comes to be dependant, directly or indirectly, upon the quantity and activity of the thyroid secretion. The thyroid gland may therefore be given a primary rôle in the causation of eclampsia.

He also favours the use of large doses of morphine in eclampsia as an adjunct to the thyroid treatment. Morphine acts by inhibiting metabolism, thus stopping the formation of poisons. A large dose (1-3 to 1 grain) produces profound effect upon the circulation, and by relieving arterial spasm it promotes diuresis and often profuse sweating. He considers the fact that morphine controls the nervous phenomena of eclampsia is of secondary importance. He refers to the beneficial action of saline effusions in eclampsia as being brought about by an "enlargement of the arterial calibre." The rationale of its action is thus the same as in the morphine and thyroid treatment, relaxation of the blood vessels resulting in diuresis.

He considers that iodothylin brings about good results in eclampsia merely through the circulatory phenomena it produces, and that it also has some indefinite specific action, which, by favouring metabolism, counteracts the effects of intoxication.

He usually administers the drug in the form of 5 grain tablets, giving from three to ten or more daily.

He records a case of eclampsia in a primipara at the beginning of the eighth month. The treatment was by one dose of morphine after the first fit and subsequently by thyroid extract. The patient recovered, and all the symptoms disappeared. In a subsequent pregnancy she took the tablets daily and no eclamptic symptoms developed. A primipara aged twenty-three in the seventh month had typical pre-eclamptic symptoms. She was put on thyroid extract and all the symptoms disappeared. The child, however, was born dead. He also reports a case of puerperal albuminuria which was cured by the administration of thyroid extract.

Dystocia Due to Short Cord.

BRICKNER, SAMUEL M., "A New Symptom in the Diagnosis of Dystocia due to a Short Umbilical Cord." *Amer. Jour. Obstet.*, April, 1902.

The author draws attention to two conditions which, in his opinion, indicate absolute or relative shortness of the cord, when present in cases of delay in the second stage of labour.

The bladder in the second stage of labour is pulled up above the pubes, and the urethra is elongated as a result. During a pain, the head in the second stage compresses the urethra and base of the bladder against the symphysis, and when there is relative or absolute

shortness of the cord, the head is pulled back in the intervals between the pains, thus releasing the urethra and bladder from pressure, and at this time, according to Brickner, several spurts of urine escape from the urethra. This escape of urine in spurts just at the cessation of a pain is a sign of the cord being short.

He also draws attention to the escape of bright arterial blood (?) during and between the uterine contractions, as well as to pain at the site of the placenta. Two cases are reported in full where all these symptoms were present. In one case the umbilical cord measured only ten and a half inches, while in the other the cord of ordinary length was found coiled twice around the neck and once around the left shoulder.

The author thus summarizes the diagnostic points indicating dystocia due to short cord:—

- (1.) Recession of the head in the intervals of pain.
- (2.) Urination in small quantities in the intervals of pain after the establishment of the second stage.
- (3.) Arterial bleeding during and between contractions.
- (4.) Pain over the placental site especially, during a uterine contraction, during the application (traction) of the forceps.
- (5.) A desire of the patient to sit up.
- (6.) Uterine inertia.

Massage of the Breasts during Lactation.

BACON, C. S. "Massage of the Breasts during Lactation." *Amer. Jour. Obstet., June, 1902.*

The author believes that the method of applying massage to the breasts as described in the ordinary text-books of obstetrics is faulty in principle and leads to disastrous results.

The error lies in the direction recommended in most text-books, that is, in that all stroking or rubbing of the breast should be practiced in the direction of the nipple, or from the base to the apex of the gland, the object being to empty the lactiferous ducts. The author claims "that there is no more proof that retention of milk causes mastitis, than that secretion of milk causes milk fever. Milk never curdles in the milk tubes."

He considers that "caked" or "hard" breasts result from congestion, where there is no infection and resulting inflammation area.

The milk is not formed during the intervals between nursings, as is generally supposed, but at the time of nursing. The process of secretion of milk is quite the same as similar processes in other secreting glands. He concludes "that while it is probable that a certain

quantity of milk is stored up in the breast before nursing begins, perhaps from one drachm to one or even two ounces, yet the greater part of the milk obtained by the child at one nursing is produced during the nursing." The painful swelling of the breast is due to the temporary overfilling of the blood and lymph vessels. The object of massage is to relieve these vessels.

The author briefly reviews the arrangement of the blood and lymph vessels of the breasts. The blood is derived from the axillary and subclavian arteries by branches which pass downward and inward under the breast, accompanying the ducts to their ultimate ramifications. The capillaries form a fine network around the acini and empty into the venous radicles in the centre of the smallest lobules. The venous trunks from the lobes unite to form a ring below the outer margin of the nipple, into which the veins from the nipple also empty. From this ring large venous trunks pass downward, outward, and upward, one set emptying into the axillary, and the other into the subclavian vein. The lymphatic system of the breast, he points out, begins as a system of spaces between the acini and their surrounding network of capillaries. These empty into canals extending through the centre of the lobules, along the milk ducts, and ultimately unite into trunks, which parallel the venous trunks and empty into the subclavian and axillary ducts and glands. Therefore, massage of the breast, to be of any value, must begin in the axillary and subclavian regions.

The technique recommended is about as follows:—The operator should be seated at the side of the bed opposite to the breast to be treated, that is, on the right side of the bed to massage the left breast. The patient should lie on the side not treated, near the edge of the bed, her shoulder and neck being well supported by pillows. The arm of the side to be treated should be somewhat extended and supported on pillows. The breast as well as the nurse's hands should be thoroughly clean; a lubricant is desirable.

The massage is begun by gentle stroking and rubbing, using the tips of the fingers in a circular motion, up and down in the axilla and under the clavicle. The pressure is gradually increased until the skin is moved with the fingers as in deep massage. As the excursions are made longer and longer, the walls of the axillary space, its anterior border, and the pectoralis major, are well kneaded. One hand is then employed along the anterior border while the other is at the upper border of the breast. Now, besides the tips of the fingers, the palms and ulnar edges of the hands, as well as the balls of the thumbs, are employed. The position of the patient enables the operator to get well under the outer border of the breast.

The gland itself may now be massaged if the treatment has not already relieved the engorgement, as is often the case. In this case the object is to relieve the veins and lymph vessels and not to empty the milk ducts. The above outlined method having emptied the efferent trunks, to empty the veins and lymph vessels of the breast itself, the manipulations must be directed towards the nipple. The gland is massaged by a stroking movement of the fingers, at first very light, and later deep, and deeper, the effort being made to surround the lobes with the fingers. The strokings are not carried to the nipple, but only to the outer border of the areola. Here centripetal strokings are substituted by a circular rubbing. This massage of the gland is combined all the time with the manipulation on the outside of the gland as previously described.

D. J. Evans.

Reviews and Notices of Books.

HANDBOOK OF BACTERIOLOGICAL DIAGNOSIS FOR PRACTITIONERS, including instructions for clinical examination of the blood: By **W. D'ESTE EMERY, M.D., B.Sc., Lond.,** Lecturer on Pathology and Bacteriology in the University of Birmingham. London, H. K. Lewis, 136 Gower St., 1902. Price 5s. 6d.

This small book, forming one of "Lewis's Practical Series," is of undoubted value to the class to whom it is addressed—the practitioners. Many a man finds himself, although quite competent to make the simpler forms of bacteriological diagnosis, unable to do so, from his inability to prepare the needed culture media and stains; and it is the privilege, only, of the city practitioner to be able to obtain these when needed. Here we find directions so simple that no one can fail to follow them correctly, and yet the needed precautions against contamination and the practical difficulties met with in the laboratory are carefully set forth. Following this chapter on technique is one on the diagnosis of the various diseases to which, so far, these methods can be applied. Here, again, the directions are most simple and explicit, and under each of the diseases noticed is a short paragraph entitled "interpretation of results," in which both positive and negative results are discussed and the liability to errors estimated.

A third chapter is concerned with the "collection and examination of certain morbid materials." These include pathological exudates, the technique of lumbar puncture and examination of the fluid, and examination of the blood, both fresh and stained. Two good coloured plates of the more common organisms and many cuts in the text illustrate the work.

We can confidently recommend the book, which, although not a proper text-book for students, excellently fulfils the purpose for which it is intended.

ECZEMA: By **L. DUNCAN BULKLEY, A.M., M.D.,** Physician to the New York Skin and Cancer Hospital, etc. 354 pages, New York and London, G. P. Putnam's Sons. Cloth, \$1.25.

In contrast to many recent works in dermatology, which are copiously illustrated; the present small monograph comes to us without illustrations. The book is a comprehensive discussion of the nature, etiology, diagnosis and treatment of eczema, and gives statistics of 8,000 of

the author's cases, both public and private, relative to the occurrence, frequency, and duration of the disease. The following fact is evidenced by the statistics,—that the disease shows very little hereditary tendency. It is hard to accept this conclusion definitely, since eczema is a disease which a patient does not always reveal to his relatives, and very little accuracy can be possible if one only takes the testimony of the patient himself with regard to the existence of the disease in others.

The author outlines the etiology from a broad standpoint, making the disease of a constitutional nature, and opposes the theory of a specific parasite, except, perhaps, in eczema seborrhoicum. In the chapter on diagnosis, twenty-seven separate skin affections are discussed, which may simulate the various forms of eczema, and the differential characteristics are given. The discussion of treatment is perhaps the best part of the work and will repay a careful study. He advocates treatment, systematically and locally. "Eczema is a disease of lowered vitality, general and local, and the aim of treatment is to restore vital tone to the system and to the integument affected."

E. S. H.

THE HEALING OF NERVES: By CHARLES A. BALLANCE, M.S., F.R.C.S., Assistant Surgeon to St. Thomas' Hospital, and PURVES STEWART, M.A., M.D., F.R.C.P., Assistant Physician to the Westminster Hospital. Illustrated by 16 plates and one figure in the text. London, Macmillan & Co., Limited.; New York, The Macmillan Company, 1901. Price, 12s. 6d. net.

This is a most interesting, instructive and readable book. The authors have performed experiments on animals and have had opportunities to examine a few cases of nerve division in man. Their work is largely histological, the conditions found at stated intervals being very clearly and tersely described. The reader is thus made familiar with the histological condition of the proximal and distal ends of divided nerves, of nerves divided and immediately sutured, of the ends of nerves joined to an intervening graft, and likewise of the changes which take place in the graft. The work done has been of a very high order.

To the operating surgeon the insertion of a few clinical cases gives added interest. In one instance, one of the authors inserted two inches of a sheep's sciatic nerve into the gap between the retracted ends of an ulnar nerve, divided eleven months before at the battle of Colenso. There was some evidence of sensation twenty days later; two months after operation a pin prick could be felt over the ulnar

area; six months after operation the anæsthesia had entirely disappeared, although the motor functions were still imperfect.

In speaking of the graft, the authors state that it is a dead tissue, and is absorbed and replaced by a living tissue. The neuroblasts are not from the graft, but are to be numbered from among the cells which invade and replace the graft from the distal as well as the proximal segment.

The last chapter deals with the "neuron theory."

A MANUAL OF THE PRACTICE OF MEDICINE: By GEORGE ROE LOCKWOOD, M.D., Professor of the Practice of Medicine in the Woman's Medical College of the New York Infirmary. Second Edition, Revised and Enlarged, Svo., 847 pages, 79 illustrations and 20 full page plates. Philadelphia and London, W. B. Saunders & Company, 1901. Canadian Agents, J. A. Carveth & Co., Toronto, Ont. Price, \$4.00 net.

This work, which has recently been largely rewritten, presents the principle and practice of medicine in a clear and concise manner. It is valuable as a supplement to the larger works, in that it is compact and that special attention has been paid to bringing forward the points essential in treatment.

The section on the digestive system, covering 169 pages, is a valuable feature of the work. It includes gastritis, dilatation of the stomach, gastric atony, ulcer of the stomach, gastric neuroses, enteritis and colitis, gastroptosis, gastric analysis and Reichmann's disease. The article on malaria is short and comprehensive, but would be more valuable were it provided with illustrative plates of the blood. The illustrations and charts are well chosen.

We can recommend the book to those wishing an up-to-date work handy for reference.

SAUNDERS' MEDICAL HAND-ATLASES—Atlas and Epitome of Operative Surgery. By DR. OTTO ZUCKERKANDL, Privat-Docent in the University of Vienna. Second Edition, Revised and Enlarged. Authorized Translation from the German. Edited by J. Chalmers DaCosta, M.D., Professor of the Principles of Surgery and of Clinical Surgery in Jefferson Medical College, Philadelphia. W. B. Saunders & Company, New York and London. Canadian Agents, J. A. Carveth & Co., Toronto. Price,

This is a compact handbook of over 400 pages. The matter is put clearly but necessarily in a terse and concise manner. No space is given to the discussion of vexed questions. One or several opinions or procedures are mentioned, and the reader is left great latitude in selecting whichever he prefers.

The illustrations are good and generously supplied. There are 40 coloured plates and 278 illustrations in a book of 410 pages. For students, it is certainly a useful and reliable handbook. For general practitioners, it is a very convenient little book, that can be referred to very readily; and the numerous illustrations make plain a good deal of the text at a glance. It is certainly one of the best in its class. The publishers' part has been well done. The book is of convenient size and worthy of confidence.

OPERATIVE SURGERY.—By JOSEPH D. BRYANT, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College. Vol. II. Operations on the Mouth, Nose, and Oesophagus, The Viscera connected with the Peritoneum, The Thorax and Neck, Scrotum and Penis, and Miscellaneous Operations. 827 illustrations, 40 coloured. New York, D. Appleton & Company, 1901.

It is coming to be recognized that operative surgery cannot be satisfactorily treated in the ordinary text-book on surgery. Many of the later text-books give scant space to the technique of operations.

Bryant's Operative Surgery is taking a very high rank in its class. Not only is technique given in detail, but a brief *résumé* of the anatomy of the field of operation precedes the description of the operation itself in most instances. The second volume is quite up to the high standard of the first. The different methods which may be adopted for a given condition are outlined with sufficient detail to be readily understood, and very often the author gives the reader the benefit of his large experience in a judicial review of their respective merits and adaptability to varying circumstances. The present volume is remarkably well up to date. The illustrations are numerous and clearly bring out the meaning of the author. In the two volumes the general surgeon, as well as the general practitioner, who operates occasionally, will find a work of ready reference giving the generally accepted methods as used by the leading surgeons of to-day.

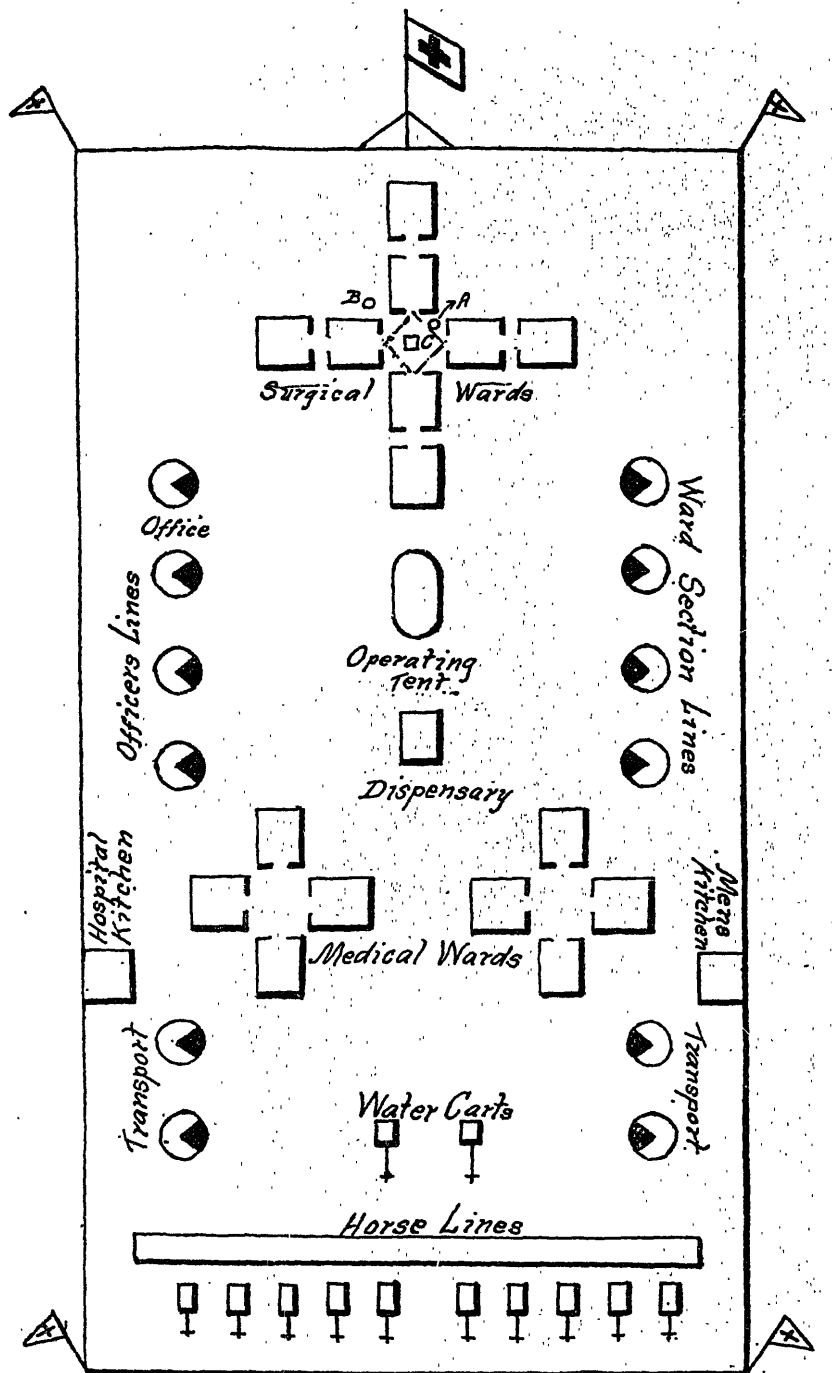
PROGRESSIVE MEDICINE: A Quarterly Digest of the Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. M. R. LANDIS, M.D. Vol. I. March, 1902. Lea Brothers & Co., Philadelphia and New York.

In this volume the surgery of the head, chest and neck are taken up by Charles H. Frazier, M.D., Professor of Clinical Surgery in the University of Pennsylvania. He confines himself largely to an enumeration

of the advances made during the past year, and a statement of the views generally accepted at the present time on the more important points. The article is of very great interest. The paragraphs dealing with chronic hydrocephalus, tumors of the brain, fracture of the skull, and their sequelæ, embody the latest opinions concerning their pathology and treatment, of both American and Continental surgeons. It would appear that cranial fractures, both with and without well-marked psychical symptoms, are to be treated in the future by more aggressive surgical methods. Recent experience seems to justify this departure; and to show better immediate results and as great freedom from the unfortunate sequelæ as the expectant method.

Dr. Frazier gives a very lucid and full summary of the more recent work done on the pathology of the Gasserian ganglion, as well as a description of the technique of operation. After discussing the surgery of the face, he takes up that of the thyroid gland and of the lungs and pleura. These are all subjects of very great interest to the physician as well as the surgeon.

The breast, heart, and large vessels and œsophagus receive due attention. The matter is good and well arranged, and cannot be too highly commended.



- A. Forbes Sterilizer
- B. Acetylene Gas Generator
- C. Ward Masters Table.

Scale 20 yds = 1 Inch

This plan, illustrating Lt.-Col. Worthington's letter on "No. X, Canadian Field Hospital" should have been inserted at page 543 of the July number, where a description of the plan of encampment will be found.

THE

Montreal Medical Journal.

A Monthly Record of the Progress of Medical and Surgical Science.

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VOL. XXXI.

SEPTEMBER, 1902.

No. 9.

CANADIAN MEDICAL ASSOCIATION.

Another meeting of the Canadian Medical Association has now passed into history, and we, of Montreal, upon whom devolved the task of perfecting the arrangements for the work and providing for the entertainment of our visitors, can look back and review the results of our efforts. Viewed from the numerical standpoint, the present meeting has been by far the most successful in the history of the Association, upwards of 350 members having registered, thus exceeding by 100 the roll of any previous meeting. To those from the other provinces we owe in great measure this portion of success, for while the profession resident in the city were well represented, the large numbers from the country districts and especially from the cities of Toronto and Ottawa made the meeting a truly representative Canadian one which we hope will always be a feature of our annual gatherings. And here let us remind our brethren of Montreal that they will have an opportunity next year of showing their appreciation of the compliment paid them by sending a large delegation to the London meeting.

Of the work accomplished it is, perhaps, too soon to judge. The division into medical and surgical sections, a revival of a plan adopted some years ago, has been, we feel, a success. At previous meetings it has too often happened that, from want of time, many contributors to the programme have been unable to present their papers except by title. While this has been unavoidable, it has been the cause of more or less discontent, especially to the infrequent attendant, who, perhaps, has made some sacrifices to be present in order to have the opportunity of bringing his views before the profession as a whole. As the Association grows it will no doubt be found expedient to still further multiply the sections so as to include the more important specialties.

The Addresses.—Of the character of the addresses, which we publish in full in the present number, the profession has good reason to be proud, and even had they constituted the whole work of this session, they would have well repaid those whose privilege it was to hear them. True it is that they will be published in all the leading journals of the Dominion, and thus can be read by all; but, equally true is it that much of the spirit that animates a speaker and serves to force upon his hearers the truth of his statements, and even to instil them with some of his own inspiration is lost by the mere reader.

The President's address, while reviewing briefly the position of the profession of the present day, touched upon one subject which is becoming of more and more importance to the teaching bodies, and through them indirectly to the whole profession. We refer to the proper proportioning of time spent in laboratory and clinical work in our medical schools. For example, with the increase of knowledge in special pathology and especially in bacteriology more time is required to make the student thoroughly conversant with this important part of his studies. Dr. Shepherd warns us that this may, if allowed to assume too much prominence, seriously curtail the time allotted to clinical work, which, he feels is the essential part of the medical curriculum.

All members sincerely regretted that Dr. John Stewart, of Halifax, to whom was assigned the honour of delivering the Address in Surgery, was unable to be present at the meeting, and the more so on account of the cause, which, we understand, was owing to the serious illness of a near relative. In his absence the address was read by one of the members. Taking as his subject the dependence of the advances in Surgery upon those in Pathology, the writer, by an apt illus-

tration of how the advances in navigation have been rendered possible by discoveries which had no apparent bearing on that science, traces the various discoveries in pathology, and points out the bearing they have had on practical surgery.

“Chauvinism in Medicine” as Dr. Osler has styled his address, is much more than a mere treatise upon that quality of mind which, as the writer shows, derived its name from one of the characters depicted in a French play of the early part of the last century. It is the earnest appeal of one, who, while never slow to recognize the best in everything and to credit our noble profession with those qualities of which we have reason to be proud, yet deplures that in many ways we exhibit the spirit of Chauvinism and urges us, the most liberal of all the learned professions, to recognize the presence of this unworthy sentiment and suppress it. With him, to know in what way nationalism, provincialism and parochialism tend to lower the profession, is to avoid them, let us hope that his address will appeal to all in the same manner.

Hospitals and Museum.—A number of members availed themselves of the opportunity of visiting the hospitals at an early morning hour, at which cases of interest were exhibited by the attending staffs. From the general expression of opinion we feel that whilst it would have been unwise to allow this feature of the meeting to interfere in any way with the work of the various sections, yet the chance thus afforded of visiting the hospitals and of seeing selected cases was highly appreciated by not a few of the members.

The exhibit of pathological specimens was of unusual interest owing to the large number and variety of specimens shown. The number of contributors indicates the widespread interest in this department of medicine, whilst the arrangement of specimens and the printed catalogue reflect much credit on the industry and enthusiasm of the members of the museum committee.

The Social Side.—The social side of the meeting was by no means neglected. Perhaps the most valuable part of a meeting of this character, as pointed out in the presidential address, is the opportunity afforded of becoming acquainted with members from all parts of the Dominion, and exchanging views and hearing of their work and aspirations.

Much of the success of the meeting was due to the public spirit of leading citizens and corporations. Amongst the entertainments pro-

vided were a garden party by Mrs. James Ross, a reception at the Art Gallery, and an afternoon on Lake St. Louis and down the Lachine Rapids by the local members of the profession.

The Association is much indebted to the courtesy of the Grand Trunk Railway in providing a special train to view the Victoria Bridge and conveying the members to Lachine, whilst the Montreal Street Railway provided a trip to Cartierville and special cars to the railway station.

The meeting was concluded by a Smoking Concert which, perhaps, more than anything else was productive of that good fellowship which adds so greatly to the success of our annual meeting.

London, Ontario, has been chosen as the place of meeting for 1903, with Dr. Morehouse, of that city, as the President.

NEW BOOKS, ETC., RECEIVED AND NOTED.

Kelly & Walsh, Limited, Singapore.

Studies from Institute for Medical Research, Federated Malay States, No. 1, Vol. I. The Malarial Fevers of British Malaya. By Hamilton Wright, M.D. (McGill) August, 1901.

The Johns Hopkins Press, Baltimore.

The Johns Hopkins Hospital Reports, Vol. X, Nos. 3, 4, 5.

W. B. Saunders & Co., Philadelphia and London.

Diseases of the Skin. By Henry W. Stellwagon, M.D., Ph.D., 1902.

Diseases of the Nose, Pharynx and Ear. By Henry Gradle, M.D., 1902.

The Year-Book Publishers, Chicago.

Materia Medica and Therapeutics, Preventive Medicine, Climatology Forensic Medicine, Vol. VII, June, 1902.

Lea Brothers & Company, Philadelphia and New York.

Cellular Toxins. By Victor G. Vaughan, M.D., LL.D., and Frederick G. Novy, M.D., Sc.D., Fourth Edition, 1902.

A Text-Book of Practical Therapeutics. By Hobart Amory Hare, M.D., B.Sc., Ninth Edition, 1902.

The New Sydenham Society, London.

The Clinical Pathology of the Blood. By Dr. Rud. Hv. Limbeck, 1901.
Selected Essays and Monographs from English Sources, 1901.