

# THE CANADA LANCET

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## PRESIDENTIAL ADDRESS.\*

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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 objectional 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, and so the members of the Association must not find fault if bored. 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 physician, but as men, who, like ourselves, are doing their best in this life and 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 favorable 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 without much personality; others again, of whom we have never heard, impress us much by their force of

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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 in 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 has been 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 the dragon and successfully vanquished him. 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 the 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 investigations 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 the 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 endeavor in any way to ameliorate the condition of those unfortunates who suffer from it. Our neighbors across the line will not allow emigrants 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 the 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 quantities 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 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 others, 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 her secrets; difficulties only stimulated them to still further efforts. Such men are not found at will, but they are horn like poets only occasionally. To paraphrase Sir Thomas Browne—"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 practised 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 Humphrey, 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. The "malade imaginaire" will always find he has something not exactly right, but what, depends on the specialist he consults. 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, gynaecology, 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 anyone 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 ver<sup>+</sup> 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 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 triumph for modern surgery; let all credit 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 Physician hath ;  
 “ First as an Angel he,  
 “ When he is sought ; next when he helps  
 “ A God he seems to be ;  
 “ The 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 men, 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 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 accuracy. 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.

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# ADDRESS IN SURGERY TO THE CANADIAN MEDICAL ASSOCIATION.

## THE CONTRIBUTION OF PATHOLOGY TO SURGERY.

By JOHN STEWART, M.B., C.M., Edin., Halifax, N.S.

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**T**HERE 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 and 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 a pathology, some notion of the nature of the morbid processes 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 medieval mariner, regarding the earth as a fixed expanse around which the heavenly bodies wheeled, casting a horoscope to secure a favorable voyage, sailing a wonder-sea of mystery and portent, anchoring to the Kraken's rugged side and being well acquainted with the Mermaid, 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 honoralist and solidist rose, struggled and sank, to reappear in new disguises as they do to this day,

when the vitalist imagined his "Archæus," 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. Medieval pathology is like a dark and troubled sea where gleams of truth shine pale through wildering mists and where conflicting currents seethe 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 of surgery depended 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 Versalius, 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 Lewenhoeck, 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 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 aneurysm 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 practicable 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 haematopathology? After Bichat came Dupuytren, the practical surgeon, and in England Charles Bell revolutionised 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 disappointment 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, ne 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 *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 the doctrine 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 their greater helplessness in the treatment of wounds. The advance in methods of 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 anaesthesia, had stimulated operators to increased activity. But the surgeon and his patient seemed the sport of a capricious fate. Epidemics of septic fever, pyaemia, 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 noonday. 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 a 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 before hand 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 ever 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 Cortes 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 surgery.

I have already had the honor of bringing before this Association some of the grounds on which we claim Lister as a great pathologist. His work on inflammation, on the Congulation 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 aneurysm was to tie the vessel on either side of the tumor, 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 haemorrhage from the proximal ligature cutting its way through the artery. The current pathology of aneurysm, founded mainly on some observations of Haller, ascribed aneurysm to a weakening of the vessel wall. Hunter came to the conclusion, from clinical and *post mortem* study that aneurysm 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 aneurysm. 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 aneurysm 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 tumor itself? Instances had been recorded by Valsalva and others of the disappearance of aneurysmal tumors 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 Zambeccarius 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 haemorrhage, that uraemia 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 developements in Brain Surgery, and especially the steps by which the perilous ascent was gained. Diseased brains have been examined since the time of Margagni, 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 in 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, activities. Anatomy is finite, but pathology, as 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.

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 mariners 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 to 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 Nuremburg, 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 sign of the times indicate that full scope will soon be given to his vituperative faculty, for in the Universities of McGill and Toronto pathological research has fairly started on its way.

If we cannot however ‘mollify the spirit of captious contradictors,’ 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 lightening the burden of humanity as well as he who directly mitigates its pains, 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.”

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## CHAUVINISM\* IN MEDICINE.†

By WILLIAM OSLER, M. D., F. R. S.,  
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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. I), 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 naturephilosophy" (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 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

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

†An Address in Medicine, (delivered before the Canadian Medical Association, Montreal, Sept 17th, 1902.)

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 Arataeus, of the men of 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, track to their sources the cause 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.

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 profes-

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\*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.

sion received a quickening impulse more powerful than at any period in its history. With the sole exception of the mechanical science, 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 appre-

ciate 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 M.M. 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 enemy of progress and of

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\* 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.



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 slightingly 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 knowledge, 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 Chareot, 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 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, Stenson 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 brain 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 Montreal, 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 democ-

racy 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 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 unparalleled 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, reeking 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 most zealous regard to fitness, irrespective of local conditions that are apt to influence the selection. Inbreeding is as hurtful 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 arties 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 quakery 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, don't 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 Matthew 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 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 enchancement 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 influence of 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 cultured 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 gentlemen—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

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\* Sir Thomas Browne.

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, 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.*

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### CANADIAN MEDICAL ASSOCIATION.

**T**HE thirty-fifth annual meeting of the Canadian Medical Association was held in the City of Montreal on the 16th, 17th and 18th of September, under the presidency of Dr. Francis J. Shepherd.

As an evidence of the great success which attended this meeting, the fact that more physicians registered on the first day than on any other previous first day, speaks volumes.

At the morning general session of the first day a resolution of regret at the recent death of Professor Virchow, which was at the same time one of appreciation for the great work of this eminent pathologist, was proposed by Professor Adami; seconded by Dr. Gardner, Montreal, and carried unanimously.

The meeting divided into sections, Dr. McPhedran, Toronto, taking the chair at the Medical session; while Dr. O. M. Jones, Victoria, B. C., looked after the Surgical section.

#### MEDICAL SECTION.

**The forenoon of first day. Living case, Splenic Anaemia.**

Dr. H. A. Lafleur, Montreal, presented patient—a man in middle life. There was a tumor—a movable mass about midway between the lower ribs on the left side and the crest of the ilium, with pulsation, but not expansile, over the tumor. The first blood count, made in March, showed 75 per cent. haemoglobin, the red corpuscles 5,000,000, the white 6,400. A blood count was made again on the 15th Sept., 1902, showed 4,000,000, and 5,800, respectively.

The tumor changed according to degree and distension of the stomach. There was absence of mobility.

Dr. Osler referred to the difficulty and the lack of complete mobility in diagnosing this case and of enlarged spleen being often clinically mistaken for something else. This was just one of those cases in which the diagnosis was more surgical than clinical.

#### Some Further Results in the Treatment of Tuberculosis.

Dr. J. H. Elliott, of the Gravenhurst Sanitarium, contributed this paper:

At a meeting of this association in Toronto in 1899, a report was made upon 155 cases of Pulmonary Tuberculosis under Sanitarium treatment. This paper is a further contribution covering some 400 additional cases treated during the past three years. The nomenclature used in the classification of discharged patients is that adopted by Trudeau: "Apparently cured;" "Disease Arrested;" "Much Improved;" "Stationary;" and "Failed."

Five years' experience has shown that almost all of the patients discharged "apparently cured" remain perfectly well. Of those with "disease arrested" many have progressed to good health at home by following the rules of life learned at the Sanitarium, renewed activity of the disease, when occurring having been as a rule due to unfavorable surroundings, or the necessity of again taking up unsuitable work.

Not the least important part of the work of a Sanitarium is its educative influence. Each patient who returns home is a teacher of the value and importance of a hygienic life, to those who wish to retain their health, as well as those who are not strong.

Experience is demonstrating the immense amount of influence for good which results from a properly equipped and conducted Sanitarium. It is unfortunate that there are not more of them. It is hoped that the attention of our philanthropists will be drawn to the crying need of such institutions, and that ere long we shall have a number of them in various provinces of Canada.

Dr. Osler congratulated Dr. Elliott on the promising results which he has obtained. Two important points should be kept well in mind:—First, Early diagnosis, and, second, getting patient as soon as possible under proper professional control.

Dr. T. V. Walker, St. John, N.B., referred to the control the physician in the Sanitarium had over the patient.

Dr. John Ferguson, Toronto, spoke of the positive advances that have been made along the line of the curability of pulmonary tuberculosis.

Dr. McPhedran, Toronto, emphasized training patients how to care for themselves at home. He believes, too, that it is true, that the

neighborhoods of sanatoria, are always areas where tuberculosis is always diminishing.

#### **Pleurisy as Associated with Tuberculosis.**

Dr. John Hunter Toronto, read this paper. He first referred to the manner in which bacilli reached the visceral and parietal pleurae through the sub-pleural, bronchial or tracheal lymphatic glands, and from the cervical, mediastinal and peritoneal lymphatics; also from the tonsils. In arriving at a diagnosis of pleurisy, a vigilant search should be made for a possible tuberculous origin. One should not always consider the outlook gloomy as with properly carried out treatment, the progress is much more favorable than in pulmonary tuberculosis. In at least two-thirds of tubercular pleurisy it is a curable affection. The rapidity of the filling of the pleural cavity is especially characteristic of tuberculosis cases.

Dwelling upon treatment, during convalescence, deep breathing should be practised very assiduously, and inflation with rubber bags is a valuable exercise. Then change to a suitable climate should be insisted on if the progress towards recovery be retarded.

#### **"Clinical Notes on Blood Pressure in Diseased Conditions," by Dr. A. E. Orr, Montreal.**

A Gaertner's Tonometer was shown, and the manner of its use demonstrated. Four hundred patients at the Royal Victoria Hospital, Montreal, were experimented on. The normal pressure was found to be 110 to 120. Seventy cases of typhoid fever were recorded in different stages, showing an average blood pressure of 104.5 m.m. It was highest, but still sub-normal, in the first week. There was only one death, which took place in a man of thirty-five years, when pressure was 105 on tenth day, 110 on twenty-first day; then three hemorrhages, and on the twenty-fourth day a fatal hemorrhage.

A large proportion of these had cold baths or cold sponging. Nineteen cases of chronic nephritis were recorded. Of this group the highest was 260; average, 208.5. Of acute nephritis there were seven cases; only three of these showed high pressure. Of arterio sclerosis 27 cases were recorded; highest, 110, 16 being 150 and over; 4 from 130 to 145; 3 from 110 to 125; 4 sub-normal. The highest was in a man of 72; glycosuria, no albumen.

Valvular diseases of heart, 48 cases, including 11 cases of mitral regurgitation. In mitral stenosis 8 cases were recorded, 6 being normal. Mitral stenosis with mitral regurgitation, 14 cases. Eleven had practically normal tension. Aortic insufficiency, 3 cases. Myocarditis, 4 cases, one man, aged 60, having pressure of 80. Hypertrophy and dilatation of

heart of unknown causation, 2 cases, 120 and 110, respectively. There were 18 cases with acute lobar pneumonia, with an average for the series of 92.7; only one death. Pleurisy, 18 cases; neurasthenia, 18 cases, thirteen having normal pressure: 3 from 135 to 140; one of 160. In malignant disease, cancer of viscera, there were no high readings. Anæmia, 6 cases, all being normal. Addison's disease, both in early stage; both normal. Purpura hæmorrhagica, one case; normal. Puerperal septicæmia, one prolonged case, ending in recovery; had extremely low blood count; 930,000; above normal. One gall bladder case, with suppuration—a blood pressure of only 50 ten days before death.

One lead poisoning, 3 of jaundice, 1 of tubercular meningitis, 2 of diabetes, 2 of exophthalmic goitre, 8 of acute articular rheumatism, heart not affected; chronic articular rheumatism, 4 cases, all normal, gonorrhæal rheumatism, 8 cases, 6 normal; rheumatoid arthritis, 16 cases, 6 normal; gout, 4 cases.

There was one case of hemiplegia and 14 of tabes dorsalis, 11 normal pressure; cerebral tumor, 8 cases; general paralysis of insane, 1 case; Friedrich Ataxia, 1 with albuminuria 140; 1 acute ascending paralysis, 140; 2 cases tic doloieux, one 130 during the attack. There was one case of epidemic influenza and 36 miscellaneous cases.

In discussing this paper Dr. Osler considered it to be the best contributed article on the subject.

#### “On the Technique of Recording the Venus Pulse.”

Dr. W. S. Morrow, Montreal, gave a practical demonstration on the blackboard, and presented a living subject on this topic.

#### SURGICAL SECTION.

**First Day—Morning Session.**—“Amputation of the upper extremity for sarcoma of the shoulder joint; living case,” by Dr. J. Alex. Hutchison, Montreal.

The patient—a young woman—presented by Dr. Hutchison, gave a history of previous injury to the shoulder, followed by the development of a growth in the head of the humerus, accompanied by intense pain. An X-ray of the parts revealed the presence of a large growth, which invaded the joint and involved the scapula. The patient was in an extremely unsatisfactory condition for operation, and presented evidences of marked cardiac disease. The incision extended from the middle of the clavicle in front down over the pectoral regions to the lower part of the axilla, and behind, passed over the scapula down to meet the anterior incision.



After severing the middle of the clavicle the great vessels were ligated, the brachial nerves divided high up, the muscles divided and the scapula freed from its attachments. There was little hemorrhage, and the wound healed readily. Microscopic examination of the growth showed it to be a mixed spindle, and round, celled myeloid sarcoma.

**"A fatal case of secondary hemorrhage four days following the removal of adenoids,"** by Dr. Perry G. Goldsmith, Belleville, Ont.

This paper deals with the case of a child operated on by Dr. Goldsmith for obstructive deafness due to enlarged faucial tonsils. The operation was not unusual, and the condition of the patient, on the second and third day after the operation, was apparently satisfactory; on the fourth day, however, repeated and alarming attacks of hemorrhage set in, resulting fatally in a few hours. There was no history of hemophilia. The patient was under the care of the family physician at the time of death, and as no post mortem could be obtained, the cause of the hemorrhage remained unknown.

**"Occlusion of posterior naris,"** by Dr. H. D. Hamilton, Montreal.

The patient was a young man aged 17, who complained of constant discharge from right naris, with complete obstruction of the same side. Duration of the condition, about 12 months.

On examination, the patient presented a complete bony partition occluding the right choana.

Family and personal history was negative.

Treatment: The bony wall was perforated, and the opening further enlarged by graduated bongies.

**"On the use of the subcutaneous injections of paraffin for correcting deformities of the nose,"** by Dr. G. Grimmer, Montreal.

Dr. Grimmer spoke briefly of various other deformities which had been corrected in this manner. In the preparation of the paraffin, it is first sterilized by subjecting it to high temperature. It is then injected by means of a sterilized syringe. In the case of the nose, the inner canthi of the eyes should be protected from the spreading of the paraffin, by firm pressure applied to the sides of the nose by an assistant's fingers. After injection, the parts are molded by the operator as required.

After treatment: Collodion is to be applied to the needle puncture, and cold compresses, to control oedema of the nose and eyelids.

Some possible dangers from the treatment are, paraffin embolism, and necrosis of the skin over the parts.

Dr. Grimmer exhibited two patients successfully treated in this manner; also two rabbits which had been subjected to similar injections.

"The telephonic properties of the inflamed abdomen; a sign not hitherto described, due to paralysis of the bowel in peritonitis" by Dr. Geo. A. Peters, Toronto.

In auscultating the abdomen with a view to ascertaining whether there was paralysis of the bowel in cases of appendicitis, typhoid perforations, traumatism, and other conditions which stand in a causative relation to peritonitis, Dr. Peters had observed that where the gurgling sounds due to the passage of gas and liquid in the bowel are absent from paralysis, the heart sounds are invariably very plainly present over the whole abdomen. In intense cases, particularly in children, both inspiratory and expiratory breath sounds may be heard. Dr. Peters' explanation of the phenomena is: unlike the healthy bowel—where the gas is retained in certain well defined and circumscribed compartments, each constituting a complete retainer in itself, with vital walls possessing a muscular tonicity under nervous control,—the paralysed bowel, by reason of its flaccid and atonic condition, permits an entire change in the disposition of the contained gas; the entire distended abdomen becomes practically and accoustically considered, a continuous column of air or gas, of the precise principle of the stethoscope. The effect of this is further heightened by the rigid abdominal wall, which acts as a sounding board. The prognostic significance would seem to indicate an unfavorable termination in those cases where the sign is very well marked in cases of septic origin.

"A case of Filariasis in man cured by operation," by Dr. A. Primrose, Toronto.

A man from the West Indies suffering from lymph scrotum presented himself for treatment and gave a history of attacks of fever which suggested the presence of Filaria. On examination of the blood one found the embryos present in large numbers. The embryo filariæ were found in large numbers at night, but disappeared from the blood during the day. An operation was performed and a large portion of the scrotum removed. The excised tissue was carefully examined by testing it in salt solution, and a parent worm was discovered and removed alive. This proved to be a female, and it was subsequently fixed and mounted in a suitable manner for microscopic examination. Subsequent to operation the filaria embryos entirely disappeared from the blood, and the inference was that the parent producing the embryos had been removed by operation.

The parent worm was afterwards carefully studied by Dr. J. H. Elliott, M.D., Toronto, (late of the Malaria Expedition to Nigeria from Liverpool School of Tropical Medicine) and a report of his investigations with drawings of the worm formed a part of the paper as communicated by Dr. Primrose.

## GENERAL SESSION.

*First Day—Afternoon.*

Address in Surgery - "The Contribution of Pathology to Surgery," by  
Dr. John Stewart, Halifax, N.S.

Owing to the unavoidable absence of Dr. Stewart, this paper was read by Dr. J. W. Stirling, Montreal. (See page 86.)

## PRESIDENT'S ADDRESS.

On the evening of the first day, in the Arts Museum, Dr. Francis J. Shepherd of Montreal delivered the annual presidential address. (See page 75.)

*Second Day—Forenoon.*

A general meeting of the Association opened with a discussion on diseases of the gall bladder and bile ducts, Dr. Alex. McPhedran, Toronto, introduced the medical diagnosis in this discussion. He mentioned the fact that the gall ducts are narrower at their entrance to the bowel than in other parts of their lumen, and as they lie nearly horizontally the out-flow of bile is easily retarded or obstructed. The ducts are much exposed to infection from the intestinal tract. Of the cardinal symptoms in these cases Dr. McPhedran considered jaundice the most common, while pain varies but is generally intense. The attendant fever is generally due to toxic absorption. The main diseases to be considered in differential diagnosis, are, catarrhal and suppurative cholangitis and acute yellow atrophy. Most catarrhal conditions are infective, but the chills and fever may occur without pus formation. The most common germ present is the common colon bacillus. In the gangrenous cases the symptoms are often ill defined. A most characteristic sign of gall stones is the recurrence of the attack.

Dr. A. D. Blackader of Montreal, in discussing the treatment of gall bladder affections said he would confine himself principally to the catarrhal forms of the disease. He considers the condition more commonly due to altered secretion of the bile ducts, the altered mucus causing inspissation of the bile. Infection of bile he thought takes place in two ways, through the bile ducts and through the portal circulation. In the matter of treatment he considers that no drugs stimulate the flow of bile to the same extent as the bile salts. The flow is increased by exercise and deep breathing. Diet should be carefully considered, should be simple, and as far as possible should contain a large amount of fat. Such patients should drink plenty of pure or mineral water. The patient should also have due regard to a proper method of dress, no corsets or constricting clothing should be worn.

Surgical Diagnosis was introduced by Dr. James Bell, of Montreal. He said it was common to find early vague signs of gastro-intestinal indigestion, which were often found to be present for a long time before an acute attack was precipitated. He spoke of the Colon and Typhoid Bacilli as common causes of infective conditions.

The subject of surgical treatment was introduced by Dr. J. F. W. Ross, of Toronto. In commencing his paper Dr. Ross expressed a certain lack of faith in the so-called medical treatment of gall stones. Speaking of some details of gall stone operations, Dr. Ross advocated drainage through Morrison's pouch. He laid great stress on the free use of gauze packing to prevent leakage into the peritoneal cavity. In gangrene and empyema of the gall bladder he does not advise removal of the gall bladder but prefers opening, flushing and draining. In many cases of cystic enlargement of the gall bladder, however, he advised entire removal of the viscus. It is well to remember, after removal of the gall bladder, that gall stones may form in the liver and may pass out into the intestines. He considers mucous fistulæ, which occasionally follow operation, as the most troublesome, and said the evil should as far as possible be prevented by the use of a small drainage tube. He also drew attention to the importance of being sure that the drainage tubes did not become blocked.

The discussion of the surgical treatment was led by Dr. G. E. Armstrong, Montreal, who recognizes and recommends the employment of medicinal treatment first in gall stones, etc. He does not advise removal of the gall bladder, for stone in the cystic duct. He recommends lavage of the stomach before operating on all gall bladder cases, and as it is difficult to know what the surgeon may encounter on opening the abdomen, he advises the administration of calcium chloride before and after operation to prevent possible hæmorrhage.

Dr. Dudley Allan, of Cleveland, Ohio, next spoke "On the Importance of Early Operation on the Gall Bladder." He considers in view of the fact that an accurate diagnosis is often impossible, an exploratory incision, at least, should generally be made early, when, he claims, it is often found that many obscure cases are quite amenable to surgical treatment, and, in fact would fail to recover if we were to temporise. He recited a number of cases where the diagnosis was uncertain, where he had made an exploratory incision and had often been gratified with the results.

The subject was further discussed by Sir William Hingston, of Montreal, and Dr. Alex. H. Ferguson, of Chicago.

**"On Foreign Bodies in the Vermiform Appendix" by Dr. James Bell, of Montreal.**

In this paper the writer expresses his opinion that appendicitis never depends on the presence of foreign bodies in the lumen of the appendix. There is little doubt, however, that when foreign bodies gain entrance accidentally into the appendix, they aggravate an otherwise septic infection. Among the foreign bodies which he has found in the appendix are,—in two cases pins, in two cases seeds, in one case wood fibre, in one case gall stones and in another case a fish bone.

Dr. Bell's paper was discussed by Mr. Irving Cameron, of Toronto.

MEDICAL SECTION :

**Second Day : Afternoon. "Kernig's Sign. The Frequency of Occurrence, Causation and Clinical Significance, by Dr. R. D. Rudolf, Toronto.**

This paper contained the results of an investigation carried out in the different hospitals in Toronto. A large number of patients of all ages was examined, suffering from diverse troubles, and the angles at the hip and knee accurately measured in over 200 of them. In 162, Kernig's sign was present in 97, that is, in over 60 per cent. It was always absent in perfectly healthy children. Dr. Rudolf considers that a more convenient plan is to extend the knee and then flex the hip as far as possible. Sometimes there is more than the usual degree of stretching of the ham strings possible and this extra flexion can, by the writer's method, be exactly measured when Kernig's sign could not show it. Out of 97 cases in which Kernig's sign was present, in 59 an angle of less than 165 degrees at the knee could only be obtained, and of these in 10 cases the angle was 135 degrees or less, showing a very marked degree of the sign. These 59 cases were of all kinds and only one of them was meningitis. Dr. Rudolf then went on to state that none of the theories of explanation of Kernig's sign were satisfactory as to its occurrence in meningitis.

**"Multiple Sarcoma. Report of a Case."**

This case was reported by Drs. F. N. G. Starr and J. J. MacKenzie of Toronto.

Dr. MacKenzie read the notes on the case. No autopsy could be made. The patient was a female 38 years of age, a seamstress. The personal or family history had no bearing on the case. For a number of years before 1901, the patient had a goitre, which, under treatment, almost disappeared in the winter of 1901. In April of this year a lump about the size of a pea was noticed slightly to the left of the middle line of the abdomen near the symphysis pubis, hard but painless and subcut-

aneous. In May two or three appeared in the middle line, an inch above the umbilicus then two or three were discovered in the back. In June two others appeared to the right of the middle line of the abdomen. In July several additional lumps were discovered in the right breast, in size from a pea to a bean. Loss of weight occurred. In August the liver was noticed to be enlarging. Commenced taking arsenic in September. In October a large tumor appeared in the left breast, and a small one was also noticed in the left thigh. Patient began to suffer from rheumatic pains. In November and December the tumors appeared in enormous numbers over the chest and back, abdomen, thighs, and arms above elbows, neck and over back, sides and top of head. In January, 1902, chains of tumors bean-sized, were noticed in the cervical region, submaxillary and suboccipital regions. By March the 8th she had thousands of tumors, most quite hard. Excisions were made and microscopic examination revealed a type of spindle-celled sarcoma, in which the prevailing cell was very long. As regards treatment the patient took arsenic with no influence on the condition. Thyroid extract produced slight diminution in the size of the tumors. The patient died. Without autopsy one cannot say where the primary seat of the disease was, although from the great involvement of the liver, that might be the source of the disease.

**"On Some Points in Cerebral Localization. Illustrated by a Series of Morbid Specimens and Some Living Cases."**

At an early morning session held at the Royal Victoria Hospital Dr. James Stewart conducted this clinic.

**"On the Asylum—the Hospital for the Insane—and the Study of Psychiatry."**

Dr. Stuart Paton, Baltimore, Md. advocated hospitals or wards in insane asylums, for proper treatment of acute cases. He also pointed out the benefits to be derived from having medical men to form a consulting staff to an asylum.

**"Anaesthetic Leprosy."**

Two very interesting patients, father and son, were presented by Dr. C. N. Valin, Montreal, according to whom they proved to a certainty the contagiousness of this disease. From the way they had progressed under treatment Dr. Valin considered the cases hopeful.

**SURGICAL SECTION.**

**Second Day: Afternoon. "Report of Three Cases of Congenital Dislocation of the Hip." By Dr. A. E. Garrow, Montreal.**

The etiology of this condition is not well established, but heredity seems to play a part. Dr. Garrow speaks of two methods of reduction,

(a) Bloodless method, (b) Through an Incision. The chief obstacle to reduction is generally due to fibrous stricture of the lower part of the capsule. Dr. Garrow's experience has been mainly by the open method. This paper was further discussed by Dr. Shepherd of Montreal.

**"The Operative Treatment of Goitre with a Report of Cases." By Dr. Ingersoll Olmsted, Hamilton, Ont.**

As the medical treatment of goitre is very unsatisfactory, an operation is recommended in the following conditions;—1st, as soon as a goitre becomes dangerous, that is, when attacks of dyspnoea occur, or inflammatory changes occur, or there is the slightest suspicion of a malignant degeneration. 2nd, all enlarged thyroids having a tendency to grow towards the aperture of the thorax, even if they are moveable. 3rd, goitres that have reached considerable development from the formation of single large colloid nodules. 4th, when with a moderate goitre symptoms like those of Basedow's disease appear, accompanied with an increased development of the goitre. The operation advised is the one usually performed by Kocher and is done under cocaine anaesthesia. It consists of a transverse symmetrically bowed incision, with its convexity downward, from the outer surface of one sterno-mastoid muscle to the other, higher or lower according to the position of the goitre. The skin, underlying platysma and fascia of the sterno-hyoid and sterno-thyroid muscles are reflected upwards. The fascia joining the muscles in the median line of the neck is then divided, as well as the outer fibrous capsule of the gland. The half of the gland which is most involved, is then shelled out of its capsule; the superior and inferior thyroid arteries tied and the isthmus cut with goitre clamp and ligated. The remaining attachments are then ligated and portion removed. The wound is closed with a subcuticular wire suture without drainage.

Twelve cases operated on during the past year were reported. The average stay in the hospital was seven days. The resulting scar was very slight and little or no pain was complained of during the operation.

**"The Pathologic Prostate and its Removal Through the Perineum." By Dr. Alex. H. Ferguson, Chicago, Ill.**

In the opening of his paper Dr. Ferguson said he proposed to discuss more particularly hypertrophy of the prostate. Some of the microscopic changes in the hypertrophied prostate are, 1st, increased weight—may be up to eight or nine ounces; 2nd, greater size; 3rd, any part or the whole of the gland may be involved. Shape varies very much. Microscopically, Dr. Ferguson found all hypertrophied prostates were benign in character. He also found frequent evidences of inflammatory changes. The effects produced may be stated as, 1st, the prostatic urethra is contracted and

elongated; 2nd, the vesical meatus is often rendered patulous and sometimes obliterated; 3rd, the ejaculatory ducts are also often patulous, allowing regurgitation of the semen into the bladder, and they are also often obstructed. The effects of obstruction on the kidneys and bladder are too well known to require discussion. *Treatment*: Dr. Ferguson's method of removal is by the perineal route. He uses a prostatic depressor introduced into the urethra, then elevated in such a manner as to press the prostate down in the perineum. The fingers of the left hand are passed into the rectum as a guide, and then he makes one bold incision through the perineum down to the prostatic capsule. Dr. Ferguson exhibited some special instruments devised and used by himself in this operation.

**"The Surgical Treatment of Enlarged Prostate."** Dr. G. E. Armstrong, Montreal.

Dr. Armstrong exhibited a specially constructed suprapubic vesical speculum, devised by himself, with a lateral opening which allows the prostate alone to come well in view in the speculum. The speculum can be packed around with gauze to protect the parts from possible burning, the offensive lobe or lobes are then cauterized with the thermo-cautery. Dr. Armstrong reported seven cases successfully operated upon. One point of advantage in this operation lies in the fact that the cauterized surface does not admit of septic absorption. He urges this method in the early stages of prostatic hypertrophy.

The paper by Dr. Ferguson and also that of Dr. Armstrong, was discussed by Dr. James Bell, Montreal, Sir William Hingston, Montreal, Mr. Irving Cameron, Toronto, and Dr. Elder, Montreal.

#### ADDRESS IN MEDICINE.

At the evening session of the second day the Address in Medicine was delivered by Dr. William Osler, Baltimore, M.D. (See page 95.)

**"The X-Rays as a Therapeutic Agent."** By Dr. C. R. Dickson, of Toronto.

Dr. Dickson said, the explanation of the rationale of the X-ray is at best as yet but a hypothesis. Fortunately we have a practical proof of its utility as a therapeutic agent in many conditions. Dr. Dickson has used it successfully in the following cases:—Naevus, lupus, vulgaris, tubercular joints, scleroderma, subacute articular rheumatism (it relieved pain in many cases), neurasthenia, carcinoma of the stomach, (this patient gained weight), and in Carcinoma of the rectum, which case is also improving.

Dr. G. P. Girdwood, of Montreal, read a paper on the *X-Rays Diagnostic and Therapeutic*, and exhibited a number of photographs.

*The X-Ray in Cancer*, was the title of a paper by Dr. A. R. Robinson of New York. A strong plea is that the X-ray largely does away with the knife, and leaves little scar. It is probable that all superficial cancers can be removed by the X-ray if seen early. In a delicate locality, such as the eyelid, the rays should always be used as paste, or the knife will do more harm. When malignant growths have spread deeply, the X-ray may be considered our best treatment.



## SURGICAL SECTION.

## Third day : Forenoon.

The first paper was "*Remarks on Sympathetic Ophthalmia.*" By Dr. G. Herbert Burnham, Toronto, followed by a paper on the "*Ocular Manifestation of systemic Gonorrhoea.*" By Dr. W. Gordon M. Byers, Montreal.

A paper on "*Eccision of the Caecum,*" was read by Dr. O. M. Jones, Victoria, B. C. Dr. Jones cited four cases operation. The first about two years after. A post mortem proved that the cancerous growth had not recurred at the point of the original operation. Symptoms in all cases were, griping pains in the abdomen, losses of weight and irregular action of the bowels, together with the presence of a mass in the region of the caecum.

## "On three cases of Perforating Typhoid Ulcer. Successfully operated on"

Dr. F. J. Shepherd, Montreal, reported these cases. First, as to technique : Dr. Shepherd has always made use of the lateral incision and has usually found the perforation near the ileo-caecal valve. By this incision the site of the perforation is more easily found than by the median. He has always closed the incision by turning in the bowel and making use of a continuous Lembert suture, employing fine silk. Other ulcerations in the neighbourhood are treated in the same way. Rubber drainage is employed. There is always suppuration in these cases and usually a hernia as a result. General anaesthesia is always used in these cases. Early and rapid operation, seeing that there are no others likely to perforate, are important points. The first case was a woman of 30, with ambulatory form ; the second was a woman of 28 admitted on the 8th day. It is of interest in this case that although perforation has taken place there was no leucocytosis. Third was a male aet 30, in the third week seized with severe pain and one hour after there was obliteration of the liver dullness and marked leucocytosis. All are quite well with the exception of hernia.

Dr. Laphorn Smith, of Montreal, presented a paper on "*A case of Total Extirpation of the Urinary Bladder for Cancer.*" General considerations ; evolution of the operation in Europe and America ; methods employed ; results in 100 reported cases. In the author's case there had been previous removal of fibroid by myomectomy. This was followed by cystitis which was treated, first by medicine, then by injection and afterwards by drainage by permanent catheter, and then by luttionhole operation when the cancer was detected by the finger. Extraperitoneal removal of bladder and affected part of ureter and pelvic glands. Recovery from operation but death on the 7th day from exhaustion.

## THIRD DAY.

*General—Morning Session.*

*Election of Officers.*—Dr. T. G. Roddick, M.P., Chairman of Nominating Committee, presented the report of this committee. London, Ont., was selected as the next place of meeting.

President, Dr. W. H. Moorehouse, London, Ont. Vice-Presidents: Prince Edward Island, James Warburton; Nova Scotia, John Stewart, Halifax; New Brunswick, W. C. Crockett, Fredericton; Quebec, Dr. Mercier, Montreal; Ontario, W. P. Caven, Toronto; Manitoba, Dr. McConnell, Morden; Northwest Territories, J. D. Lafferty, Calgary; British Columbia, C. J. Fagan, Victoria. Local Secretaries: Prince Edward Island, C. A. MacPhail, Summerside; Nova Scotia, Dr. Morse, Digby; New Brunswick, J. R. McIntosh, St. John; Quebec, R. Tait McKenzie, Montreal; Ontario, Hadley D. Williams, London; Manitoba, J. T. Lamont, Treherne; Northwest Territories, D. Low, Regina; British Columbia, L. H. McKechnie, Vancouver; General Secretary, George Elliott, 129 John Street, Toronto, Ont.; Treasurer, H. B. Small, Ottawa, Ont.; Executive Council, Drs. Moore, Eccles and Wishart, London, Ont.

#### Dominion Health Bureau.

Dr. E. P. Lachapelle, Secretary of the Board of Health of the Province of Quebec, moved the following resolution, seconded by Dr. J. R. Jones, Winnipeg, which was carried unanimously:—

“Whereas public health, with all that is comprised in the term, sanitary science, has acquired great prominence in all civilized countries and

Whereas enormously practical results have been secured in the community at large, by the creation of health departments under Governmental supervision and control, and

Whereas greater authority and usefulness are given to health regulations and suggestions when they emanate from an acknowledged Government department;

Therefore, be it resolved, that in the opinion of the Canadian Medical Association, now in session, the time is opportune for the Dominion Government to earnestly consider the expediency of creating a separate department of public health, under one of the existing ministers, so that regulations, suggestions and correspondence on such health matters as fall within the jurisdiction of the Federal Government, may be issued with the authority of a department of public health.

That copies of this resolution be sent by the general secretary, to the Governor-General in Council and to the Hon. the Minister of Agriculture.”

#### Treasurer's Report.

Dr. H. B. Small presented his report. 317 members had been in attendance, nearly 100 larger than any other previous meeting. All outstanding indebtedness had been paid and there was in the treasury \$325 to the good of the association.

Votes of thanks were passed to Mr. and Mrs. James Ross, of Montreal, in whose handsome grounds had been tendered a garden party on the afternoon of the first day; to the local committee and transportation committee, special reference being made to Drs. C. F. Martin and J. Alex. Hutchison, for their indefatigable efforts for the success of the meeting; to the treasurer; to the president, and the profession generally for their hospitality.

Thus was closed the greatest meeting of the 35 years of the Association and it is to be hoped that the profession throughout Canada will still further take an active interest in their national organization.

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# THE CANADA LANCET

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## EDITORIAL.

### THE CANADIAN MEDICAL ASSOCIATION.

IT may truthfully be said that the recent meeting of the Canadian Medical Association was a record one. Never before in the history of this Association was there such a large attendance. But the mere fact of numbers in itself would not constitute a great meeting. There were other and more important features that will make the Montreal meeting worthy of remembrance for many a year.

One of these features was the unbounded hospitality of the profession and its friends in Montreal. No effort was spared to make every one feel at home, and obtain as much enjoyment as was possible with the busy days of the convention. The thanks of every one who attended the meeting are due to the local members of the executive, who had almost the entire trouble of making all the arrangements. That these arrangements were well planned out is borne out by the fact that everything came off like clockwork. In this connection, however, no small mede of praise is due the General Secretary, Dr. George Elliott, who, we are glad to state, was re-elected. Drs. Shepherd, Martin, Macphail, Abbott, Hutchison, Sir W. Hingston, Birkett, J. G. Adami, Reddy and Stirling, all of Montreal, must be singled out for special praise.

The At-Home, given by Mrs. James Ross, of Peel Street, was both an enjoyable and brilliant event. Every one was made to feel at home. All who availed themselves of Mrs. Ross's kind invitation carried away the most delightful recollections of their reception and entertainment. The thanks, tendered by the Association to Mrs. Ross, were but a small portion of the real thanks expressed by every visiting member.

The reception, given by the President and the local members of the Association in the Art Association Building deserves more than a passing word. On this occasion the President delivered his address, and members and their friends had an opportunity of viewing the splendid collection of paintings covering the walls of the spacious rooms of the building. In addition to excellent singing abundant refreshments were served by the ladies.

A local committee of ladies arranged a most delightful reception for the lady friends of the visiting members. Refreshments were served, and the visiting ladies were taken for a very pleasant outing to many places of interest.

Thursday afternoon was spent by the members of the Association and a large number of friends in the most perfect enjoyment of a ride on the Grand Trunk over the Victoria Jubilee bridge, a good opportunity being afforded of seeing this famous structure. The steamer "Duchess of York" was in waiting to take all for a sail on Lake St. Louis, and then down the Lachine rapids. Refreshments were served on the steamer to the sound of music, and all were more than delighted.

The complimentary smoking concert in the Victoria Rifles Armoury, on Thursday evening, was both well attended and enjoyed. Apart, however, from these entertainments, the visiting members were deluged with invitations to the homes of the profession in Montreal and their many friends, who did so much to make everything pass off so smoothly.

But the most important feature of this great meeting was its educational side. The addresses, papers and discussions were numerous and meritorious. They were certainly such as would reflect credit upon any medical gathering, whether national or international. We shall, however, only refer to the three main addresses.

The address of the president, Dr. F. J. Shepherd, was full of solid matter for careful reflection. At first thought, some may not agree with some portions of his address; and yet we are of the opinion that, the more it is studied, the more general will be the assent to the main positions taken in it. From his attitude on the Roddick bill there should be no dissent. It is to be sincerely hoped that the day spring of a national council and standard is at hand, and that, so far as medicine is concerned, the provinces will become as one. Nationalism in medicine may have its evils, but what shall be said of provincialism!

Upon Dr. Shepherd's remarks on the rewards of the physician and the many forms of quackery nothing need be said. They speak for themselves. But it would not do to pass over so lightly his words regarding laboratory teaching. No one should carry off the idea that he is inveighing against the value of work done in the laboratory. Dr. Shepherd is too broad and liberal in his views upon the medical sciences to make any such mistake as this. What he is levelling his shaft against is the tendency to absorb so much of the student's time in laboratory work that other and most important subjects must, as a consequence, be neglected. The attempt to make medical students specialists in laboratory work is a great error, and a growing one in present day teaching.

What should be imparted is a good working knowledge, or foundation in chemistry, microscopy and bacteriology. No one in the profession is more alive to the debt which general medicine and surgery owe to the study of bacteriology than Dr. Shepherd; but such study must be of the post graduate character. Upon the whole, we congratulate Dr. Shepherd on his able address, and feel sure that it will not be as water spilt upon the ground that cannot be gathered up again, but will return in due time bearing much fruit.

The address on surgery by Dr. John Stewart, of Halifax, must be called an able effort. In it a fine parallel is drawn between the early navigators venturing forth upon an unknown ocean, without charts, or instruments to guide their course; and the early investigators in medicine, forcing from nature, one by one, her hidden secrets. From the days of mysticism to those of scientific experiment we are led step by step. From Paracelsus to Vesalius, from Harvey to Hunter, and on to such men as Lister there is a long lapse of time, but no vital break in the chain of progress. The one thing that was lacking in the address was that the distinguished author was detained at home through illness; and therefore it had to be read for him by another, a task which was admirably performed by Dr. J. W. Stirling.

When we reach the address in medicine, we reach one of the most brilliant deliverances that ever came from any platform in Canada. Dr. W. Osler, in language and thought that bore evidence of extensive scholarship, preached a sermon on the life and work of the doctor and what he ought to be morally, socially and professionally, in order that his life and work might attain to their highest levels and yield their finest fruits. Lengthy as the address is, it is impossible to curtail it; for all parts of it are equally good. Every sentence is a text for further elaboration. He too, like the President, spoke in strong terms against sectionalism in medicine. There ought to be no provincial dividing lines. In Dr. Osler, the Dominion Registration Bill found a champion of great power. It can be said of the address in medicine, as Keats wrote in his *Endymion*, 'A thing of beauty is a joy forever.'

Just to the extent that the Montreal meeting was a great success, the difficulties of our London friends are increased. But we have confidence in the profession of the Forest City, and we feel sure that no stone will be left unturned to make the meeting of 1903 as complete a success in every way as was the one of 1902. *Wir heissen euch hoffen.*

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## THE OPENING OF THE COLLEGES.

**A** GAIN the time has come round for the opening of the medical colleges. From all parts of this vast Dominion, students betake themselves to the various seats of medical learning—the former students to resume their work, and the new ones, with mingled hopes and doubts, to break first ground. There are over 2,000 young men studying medicine in Canada. This would, in round numbers, mean about 700 fresh recruits; and about 400 annual graduates.

It has often been said, and with much truth, that the medical profession is greatly overcrowded. But there is no avocation that is not in a similar condition. The legal profession is perhaps even more congested than the medical; and the ministry holds out few inducements to the best class of young men. In law, it is often difficult enough for a barrister of very fair ability to make a comfortable livelihood, whereas in the ministry altogether too many are struggling along in a hand-to-mouth existence, or have no charge at all.

So, if one turns to other callings, the same state is met with. In every line of business there are persons enough and to spare. The financial circles are done to death by those who are trying to make a living by speculations and the exercise of their wits. Taking the total number of medical men in any country, and a similar number of men from any other pursuit in life, and it may safely be said that the medical practitioners average as good incomes, and enjoy as many comforts and privileges, as any equal number of their fellow citizens:

In the professions and the various business pursuits, the same law holds good that is everywhere met with in nature, that the tendency of movement is in the line of least resistance. The migrations of the human race have been largely determined by the search for safety, the agreeableness of some climate, and the ease with which foods could be procured. The movements towards the respective avocations in life are decided upon somewhat similar lines of argument. As soon as it becomes clear to intelligent observers that the profession of medicine, from the physical, financial, intellectual, ethical, and social standpoints, holds out fewer inducements than other callings, so soon will there be a marked falling off in the numbers entering upon its study.

Those who are now members of the profession have no right to expect a monopoly of it. That it will, in the future, as it has ever been in the past, continue to be replenished by fresh and ample accessions, there is no doubt. To the man of fair health, average ability, becoming integrity and steady industry, there is a sure living in the profession of medicine. There is an absence of the reverses so often encountered in business. While it may



be true that the medical practitioner rarely accumulates much wealth, it is also true that he seldom experiences the worries and losses of those in commercial and industrial pursuits. Although only a small percentage of the medical profession become what might be called rich, yet very few fall below the level of substantial comfort. It may be said that professional incomes in this country run anywhere from \$2,000 to \$10,000 a year.

Daily there are being born into this world human beings, and daily death is claiming its full measure. Between these points, there is an endless variety of the diseases and accidents to which human flesh is heir. For the man of energy and ability, there is a constant field of employment. But with the increase of the numbers in the professions, and the control of many of the infectious diseases, the chances of large incomes are on the whole, growing less. The profession is, after all, perhaps its own worst enemy. There is no quarrel with those noble and constant efforts to lessen the incidence of disease, such as the plague, typhoid fever, and smallpox, which cut out many a fee from the total income; but there is good ground for saying a word against some of the other ways by which medical practitioners are lessening their incomes, and lowering their status. Among these may be mentioned the vast amount of free treatment that is given under the guise of charity in the many hospitals and dispensaries. Then again there is the iniquity of lodge and contract practice. The laborer is worthy of his hire; and why should a doctor attend a lodge or club for half, or even one-fourth of what his services are worth. The desire to secure the lodge to out bid another practitioner, or in the hope of gaining an introduction to the families represented in these lodges, or for the immediate small addition to their incomes, may be the reasons in many cases for taking lodges, or contract practice. We have no hesitation in saying that it is a great mistake, and would urge upon the profession to look this evil boldly in the face and have done with it.

To those who are now pursuing their studies we would urge all diligence. There is much and arduous work to be done before the day of graduation. Nor does study there cease. The work done at college cannot be said to be more than that of acquiring a good working knowledge for the great duties of life:—

“Life is real, life is earnest,  
Life is not an idle dream.”

The broad ocean of professional knowledge and work lies before you. Many there have been who have sailed upon its waters, searching for its rich but often deeply hidden pearls. The treasures of this ocean of thought and work are by no means exhausted. There are many

prizes yet to be secured. "Pallida mors æquo pulsat pede pauperum tabernas, regumque turres." There are for the profession the pathways that lead to the cottage and the palace: for death knocks at the gates of both. To the student of medicine the words of Goethe, poet, sage and writer, have a special meaning:—

The future hides in it  
Gladness and sorrow;  
We press still thorow;  
Naught that abides in it  
Daunting us—Onward!

Here eyes do regard you  
In eternity's stillness:  
Here is all fulness,  
Ye brave, to reward you;  
Work and despair not.

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## EDITORIAL NOTES.

### Acute Dilatation of the Stomach.

T. Clifford Albutt, M.D., F.R.C.P., in *Medical Press and Circ.* of 6 Aug. has an article on the above subject. As to treatment he remarks that it must vary somewhat with the cause. Vertigo and lassitude after meals often depend upon distension, and may be relieved by regulating the diet, and restriction of fluids at meals. In sleepless cases, change of air and hydrotherapy do most good. In heart cases, the relief of an atonic dilatation is of the utmost value. These patients must not be allowed too much farinaceous food and sugar, as they ferment readily. Mastication must be carefully provided for, by regulation of the method of eating and attending to the teeth. Pepsin is a very useful aid to digestion. The abuse of corsets and belts must be corrected. Rest, both before and after meals, is important. A course of massage may be required, in some cases with emaciation. These patients must not expose themselves to excessive stresses and other causes of fatigue.

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### Pregnancy After Removal of Both Ovaries.

At a recent meeting of the Obstetrical Society of London, the above subject was fully discussed. Dr. Alban H. G. Doran reported the case of a woman who had one child. After this one ovary was removed. Subsequently she had four children. He then had occasion to remove the second ovary. She menstruated again and had one child. He reported two other similar cases. He expressed the opinion that some ovarian

tissue was left, and that one or both of the tubes escaped obliteration. Dr. Bland Sutton stated that tying the tubes did not necessarily cause sterility, as the continuity of the tube might be restored. He gave a case. Dr. Galabin also stated he had tied both Fallopian tubes, without success, to sterilize patents. He now tied the tubes in two places, and removed the sections between the ligatures, pulling out the stump and cutting it off close. Dr. Amand J. M. Routh thought that these cases of pregnancy, after the removal of both ovaries, were due to a portion of the ovary, usually of the hilum, being left; and that this became active, developing graafian follicles.

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### PERSONAL.

Dr. S. J. Hopkins, of Port Colborne, dropped dead August 14th.

Dr. W. H. Bowles, of Orangeville and Miss Helen M. Snell were married at Bolton, 20th August.

Dr. J. J. Watters, of Winnipeg, and Miss Annie E. Puddicombe, of Haysville, Ont., were married 11th September.

Dr. George M. Hall, of Galt, has received \$2,000 for his first aid to the late President McKinley when shot. We congratulate Dr. Hall.

Dr. Edgar, formerly Medical Superintendent of the Hamilton City Hospital, has commenced practice at 142 West Jackson St., Hamilton.

Dr. J. Coleridge, of Ingersoll, and Miss Jackson, of Mimico, were married September 11th, at the residence of the bride's mother, in Mimico.

Dr. and Mrs. Albert A. Macdonald's daughter, Helen Augusta Beatrice was married to Mr. Campbell Reaves, on September 20th, in St. George's Church, Toronto.

Dr. Wm. Bayard, of St. John, N. B., celebrated recently his 89th birthday. He has been 66 years in practice. The hospital board of which he is chairman made him a presentation.

Dr. J. S. Tennant, one of the most widely known and popular physicians in the northern counties, died at Lucknow on Wednesday. Death came very suddenly. The doctor was in consultation with a brother physician at Ripley on Wednesday, 10th September. Driving home in the evening he complained of not feeling well, but nothing serious was anticipated. Cholera morbus, however developed and at six o'clock he passed away.

## BOOK REVIEWS.

### DISEASES OF THE SKIN.

A Treatise on Diseases of the Skin. For the use of advanced students and practitioners. By Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$6.00 net; Sheep or Half Morocco, \$7.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

**T**HIS book presents the practical part of the science of dermatology in a sufficiently full and complete manner to make the work one that will give the general practitioner a clear comprehension of the symptomatology, diagnosis, and treatment of the various affections with which he is most likely to come in contact. Diagnosis being the most difficult and confusing part of cutaneous medicine has been wisely accorded considerable attention. The elaborate remarks under General Diagnosis will be found of substantial aid in narrowing the diagnostic possibilities. Treatment has been detailed with unusual clearness and accurateness, the author, in addition to the remedies and methods used in his own practice, having referred frequently to those employed and advised by others.

But in stating that the book deals with the practical parts of dermatology, it is not to be understood that etiology and pathology have been neglected. These have been given entirely satisfactory consideration, and their treatment will be found a complete, but concise, reflex of our present knowledge. The clinical and pathologic aspects are further elucidated by a large number of very beautiful illustrations, mainly from the author's own collection, besides a number of colored lithographic plates of exceptional merit. Indeed, the work, though originally planned for the student and general physician, will be found of material assistance to the dermatologist, as presenting the most recent advancement in the subject.

The whole subject of dermatology is discussed under the somewhat simple, but common sense headings of Hyperæmias, Inflammations, Hæmorrhages, Hypertrophies, Atrophies, New Growths, Neuroses, Diseases of the Appendages, and Parasitic Affections. One can readily see that under such a simple classification it will be an easy matter to follow the author. One of the dreads of dermatology is the terribly complicated systems of classification so often encountered.

The pages devoted to the anatomy and physiology of the skin are of more than passing interest, and lay an excellent foundation for the

further study of the work. We would commend this portion of the work to the attention of all who are interested in the subject of skin diseases.

Then comes a section on the primary and secondary lesions met with in the study of skin diseases. Under the head of primary lesions there are careful descriptions of macules, wheals, papules, tubercles, tumors, vesicles, blebs, and pustules. Secondary lesions are described as excavations, fissures, scales, crusts, ulcerations, and scars.

Passing over general etiology, pathology, and diagnosis, we come to the remarks on general treatment. The first essential in treatment is a correct diagnosis. It would be quite inexcusable to treat tinea versicolor with mercury, under the belief that it is a syphiloderm. A proper diagnosis consists in arriving at the etiology and pathology of the disease as well as merely naming it. The author takes strong ground against the view that skin diseases should not be healed up too quickly. The putting the skin into a healthy condition will relieve the patient of annoyance and worry, but will conduce to his general well-being. For a time, due to the teachings of Hebra, Neumann, and Kaposi, the practice was to trust almost entirely to external remedies. The author takes just exception to this; and states that, while external remedies are required in most cases, the proper constitutional management is likewise important, and the maintenance of good health keeps up tissue-resisting power, and is a potent influence in rendering the cure permanent. Cutaneous weakness is often due to general ill-health, from organic or functional derangements of important organs. The skin is one of the four great emunctories of the body, the other three being the kidneys, the digestive tract, and the lungs. If the skin is deranged much of its work is thrown upon the others, and *vice versa*. The study of the constitutional side is highly important.

Among the general remedies must be mentioned tonics such as iron, manganese, arsenic, quinine, strychnia, acids, cod liver oil, etc. These are often very useful for the general indications present, such as anaemia, want of nerve tone, poor appetite, etc. Among the aperients, salines are very serviceable, except in the anaemic. The antacid magnesia is often very useful. Active purgation should as a rule be avoided. Cascara is perhaps the most useful of all the vegetable laxatives. In many eruptions, as urticaria, erythema multiforme, and some cases of eczema, due to auto-intoxication, the employment of gastro-intestinal antiseptics is very helpful. In many skin diseases, as eczema, psoriasis, inflammatory acne, dermatitis exfoliativa or herpetiformis, diuretics, and especially saline diuretics, are of the greatest utility. Alteratives, as the mercurials, the

iodine compounds, and the animal extracts. The value of mercury in syphilodermata is beyond doubt. The value of iodine in some strumous conditions, in the late stage of syphilis and in actinomycosis, and blastomycetic dermatitis is well attested. It has also undoubted value in large doses in some cases of psoriasis. Antimony has been found of considerable value in inflammatory skin diseases. Of the animal extracts, thyroid is useful in myxœdema, psoriasis, and lupus vulgaris, and suprarenal in vitiligo. Arsenic is a remedy of great value. It acts on the nervous system and the skin. It improves the nutrition of the epithelium in a special manner. It is most useful in psoriasis, lichen planus, persistent dry eczemas, dermatitis herpetiformis, and pemphigus. When the cases are properly selected, it is a remedy of great value. It should not be given in the acute stage of psoriasis.

Some drugs taken internally have a germicidal action. This is the case with mercury and syphilis, and quinine and malaria. To these must be added the remarkable success of assafœtida in dracunculosis. Cod liver oil seems to have some such influence in skin diseases, apart from its nutritive qualities. Sulphur, owing to its exhalation through the skin, when given internally may also have an influence over cutaneous micro-organisms.

On the external remedies the author makes some interesting comments. As a general rule, in acute inflammatory diseases, notably in many cases of eczema, water is prejudicial and its use should be restricted as much as possible consistent with cleanliness. Rain or boiled water is less irritating than ordinary water. In hyperæmic and acute diseases, and in chronic conditions, as dermatitis exfoliativa, and eczema, the water may be made more agreeable to the parts by adding an ounce, or more, of gelatin, starch, or bran to the gallon. In some chronic scaly diseases as ichthyosis, or psoriasis, the free use of water may be beneficial. The baths may be medicated with sodium bicarbonate, sodium borate, potassium carbonate, or ammonium muriate one dram to the gallon. In some chronic sluggish dermatoses, a bath, containing one dram of sulphur, or potassium sulphide, to the gallon, is useful.

With regard to soaps, there are two main varieties: the soda soap, of which castile is an example; and the potash soap, as green soap. Soda soaps should be as nearly neutral as possible. Such soaps must be used with great care on persons with a thin epidermis, or sensitive skin. If the skin is at all sensitive, the washing with the soap should be done at bed time. Superfatty soaps are made to overcome the irritation of the alkali. A strong soda soap is of use in acne. Sapo molliis, or green soap, is a strong soap, and should not be used in acute or subacute conditions.

For the removal of scales and crusts it is often valuable; and also in some cases of acne, seborrhœa, and psoriasis of the scalp.

On lotions there are some very appropriate remarks. It is stated that they are most frequently applicable in acne, urticaria, pruritus, erythema intertrigo, and some cases of eczema. The drying effect of lotions can be lessened, or abolished by adding from 1 to 10 minims of glycerine to the ounce. From 5 to 10 of alcohol may be added for the pleasant, cooling sensation it produces. These additions should not be in larger quantities than the above as they may become irritating. A favorite lotion recommended is the calamin-and-zinc-oxid lotion, consisting of about 1 or 2 drams each of calamin and zinc oxid to 4 ounces of water, or of 2 ounces each of lime-water and plain-water. To this may be added a few drops of carbolic acid and glycerine to each ounce. This lotion is particularly valuable in acute erythematous and vesicular eczema, erythema intertrigo, and other irritable conditions of the skin. If it is desired to render the lotion more antiseptic, 5 to 15 grains boric acid may be added to each ounce. Among other lotions may be added the indispensable ones of boric acid, and black wash diluted one-half with plain water or lime water.

Ointments are the most frequently employed preparations in skin diseases. In many cases they are the most valuable. The best ointment bases are: (1) Prepared lard, which is the best all-round base, possessing penetrating qualities scarcely exceeded by any other fat; (2) Petrolatum, vaselin, or cosmolin are valuable, as they have good penetrating powers, and do not readily change; (3) Cold cream (*unquantum aquæ rosæ*) is soothing and cooling, and is an admirable base when well made, and may be used if other fatty applications disagree. Among the best of the soothing ointments are: oxide of zinc, cold cream, simple ointment, cucumber ointment. The stimulating ointments are those containing sulphur, tar, white precipitate, calomel, resorcin, salicylic acid, chrysarobin. Much care should be taken that salves are not rancid.

The above are only a few of the many excellent suggestions throughout the work. Of the entire work, it may be said there is not a disappointing page. The book is published in splendid form. The illustrations are of very high merit. On the whole, the work is a very superior one.

## CELLULAR TOXINS OR THE CHEMICAL FACTORS IN THE CAUSATION OF DISEASE.

By Victor C. Vaughan, M.D., LL.D., Professor of Hygiene and Physiological Chemistry and Director of the Hygienic Laboratory in the University of Michigan; and, Frederick G. Nory, M.D., Sc. D., Junior Professor of Hygiene and Physiological Chemistry in the University of Michigan. Fourth Edition, Revised and Enlarged. Lea Brothers & Company, Philadelphia and New York; \$3.00 net, 1902.

**I**N 1887, the first edition of this work appeared, under the title of "Ptomaines and Leucomaines, or Putrefactive and Physiological Alkaloids." About 1891, the third edition appeared with the title, "Ptomaines, Leucomaines, Toxins and Anti toxins." The present, fourth edition, bears the more modern and accurate title of "Cellular Toxins, or the Chemical Factors in the Causation of Disease." We think this change of title a distinct advance in the right direction. The effects of the various toxic products, produced by germs, by the organs of the body, or by the retention within the system of waste material, are far reaching on the cells of the body. Cell poisoning is an important question in pathology.

In the etiology of disease, the authors speak of (1) the bacterial, where microscopical forms of vegetable life enter the system and produce special poisons; (2) the fungous diseases, where a vegetable organism again is the cause, but one that injures the part affected, usually the skin, without producing a poison; (3) single-celled animal organisms invade the body, impairing the parts affected, and giving rise to the protozoal diseases; (4) more highly organized animals, passing a portion of their existence on another animal, and giving rise to the parasitic diseases; (5) many poisons, generated outside of the body, may be taken into the body, causing intoxications; (6) diseases due to injuries of any organ, or the traumatic; (7) the cells of our organs may fail in their work and poisons be the result, or states of auto-intoxication arise—the autogenous diseases.

How do germs cause disease? This has been answered in a number of ways: (1) by depriving the tissues of oxygen; (2) by filling the small vessels with emboli, formed from the germs; (3) by consuming the proteids; (4) by destroying the red blood corpuscles; (5) the production of chemical poisons. This last is the true theory. Microorganisms may produce from themselves soluble chemical ferments, or produce ferments by splitting up the proteids of the body, or by producing some alkaloid, as the cells of the poppy produce morphia.

In studying bacteria it is necessary to remember that some are pathogenic while others are exclusively toxicogenic. The pathogenic will live in the animal body and produce poisons, give rise to disease



with symptoms during life and post mortem changes. The toxicogenic do not live in the animal body, but may in a suitable medium, as milk, and form most virulent poisons, which, if taken into the body, would prove most injurious. Bacteria form two main classes of chemical products—ptomains and toxins. The former will unite with acids and give rise to salts. These ptomains may, or may not, be poisonous. Toxins on the other hand are not basic, and are always poisonous. These poisons are produced by synthesis in the protoplasm within the bacterial cell-wall; and not by analysis in the culture media in which the bacteria are growing.

There is a very interesting and able chapter on the germicidal property of the blood serum. The following conclusions are arrived at:—(1) the exact nature of the germicidal constituents of the blood, or alexins, is not known; (2) the alexins have their origin in the white blood corpuscles; (3) disintegration of the white blood corpuscles liberates alexins; and (4) it is probably true that alexins are also secreted by living leucocytes. Strong arguments are advanced to prove that these alexins of Buchner are composed of nucleinic acid which is shown to exist in the blood, and to come from the white corpuscles. A given volume of blood possesses the power to destroy only a certain number of bacteria. This is called its maximum power.

An important chapter is devoted to lysins, or what is known as Pfeiffer's phenomenon, or bacteriolysis. It has been shown that if bacteria are put into the peritoneal cavity of an immunized animal, these bacteria swell up and break into small granules, and become dissolved. If a mixed infection be introduced, only the bacteria against which the animal is immunized will thus disappear, the others remaining and growing. This whole question is discussed with much clearness.

Immunity, as it deserves, receives much attention. This is treated of as, (1) natural immunity when the animal has no liability to a certain infection; (2) as inherited immunity, where the fetus through the placenta, or the milk, is protected against an infection; (3) acquired immunity, which may be active if the bacteria live in the body and produce antitoxins in it; or passive, if serum, containing antitoxins, is injected into another animal, until it is protected. This is what happens when the horses' serum, containing diphtheria antitoxin, is injected into the child.

In cases of natural immunity the germ cannot thrive in the body, but may produce a toxin that is capable of causing severe symptoms, or death. The bacillus pyocyaneus is often found on man's body, but seldom affects him, though he is very susceptible to its toxin. In the same way

the micrococcus prodigiosus is not pathogenic to man, but he is readily affected by its toxin. The opposite of this is true in some cases. The healthy man is not affected by tuberculin, the toxin, but is readily so by the germ. The natural power of some animals to resist the tetanus infection can be overcome by injecting the animal with a mixed infection. It has been shown that this natural immunity is not due to the alexins in the blood. It is most probable that the phagocytes have much to do with natural immunity, aided by a special power of attraction for certain germs called chemotaxis.

In attempts to secure acquired immunity the following agents have been tried: (1) Treatment by weakened cultures of the germ; (2) the employment of sterilized cultures of the specific microorganism or by the use of its toxins; (3) by treating the animal with the specific organism mixed with other bacteria. Often first, we have a good example in the case of chicken cholera, where the germ loses its virulence by being grown for successive generations. So in snake venom, immunity is obtained by frequent injections of weak, non-fatal doses. In the Pasteur treatment of hydrophobia it is no doubt true that the dried cord contains an attenuated form of the poison, and that the employment of this gives immunity during the period of incubation, when the treatment should be commenced.

Much attention is given to the possibility of bacteria producing certain enzymes that have the power of digesting the germs from which they came. This seems to be proven by the facts that: (1) in liquid cultures the bacteria cease to grow after a time; (2) some of these enzymes digest other germs as well; (3) the curative value of cultures is due to these bacteriolytic enzymes; (4) the production of artificial immunity is due to the formation in the body of a compound of the enzyme with some proteid; (5) agglutination is the first stage of the bacteriolytic action of the enzymes; (6) the bactericidal action of normal blood is probably due to enzymes. By treatment the blood serum acquires bactericidal or antitoxic properties. This immunity may be against the germs, or their toxins. The serum of an immunized animal has the power to inhibit the growth of the homologous bacterium. The bactericidal, or agglutination action of the blood serum militates against the growth of the germ.

The subject of immunity to bacterial toxins is well explained. Much attention is given to Ehrlich's *side chain theory*. According to this theory, small doses of the toxin stimulate certain corpuscles until they become so active that they throw off bodies that seize upon the toxin bodies. These bodies in the blood are called toxophils, or antitoxins.

They form harmless unions with the toxins. When the blood contains a large number of these toxophil bodies, the animal is immunized to the toxin of the given germ.

Chapters follow on food poisons, ptomaines, and leucomains. Although no attempt is made to review these, they are of extreme interest, and contain much information on the poisons found in foods, formed by bacteria, and by the cells of the body. Leucomains are basic substances which exist in the proteids of the body, or in the products of tissue metabolism. Ptomaines are the result of the action of bacteria in splitting up the proteids. They are the result of the breaking down of proteids and are anlytic. Leucomains are prepared in the proteids, and are not the result of bacterial activity.

The last chapter in the work is on the very important subject of "Autogenous Diseases." The cell and its functions play an important part in auto-intoxication. Cells are grouped together to form organs. The cells of the liver do one sort of work, while those of the stomach do another. Failure in one group leads to derangement and failure in other groups. There is no exception to the statement the excretions contain poisonous matters, which act injuriously on the organs of the body, if they are not gotten rid of. These poisons originate in the complex changes that take place in the splitting up of the organic molecule into simpix compounds. This breaking up takes place until the end products, urea, ammonia, water, and carbon dioxide are reached. Leucomains are of cellular origin, and many of them contain hydrocyanic acid. It matters not how these proteids may be broken up, poisons may be found.

Among the metabolic changes in the animal body there are substances which are more or less toxic in their action. By the term autogenous is meant that the materies moibi arise in the cells of the body, and not from some cell or germ infection, or poison introduced from without. Great care must be taken not to confound true autogenous diseases with disease that are really secondary to some cause from without. For example, the excessive use of alcohol may cause cirrhosis of the liver, and this result in faulty action of the liver and the poisoning of the system. Some contend that even the cirrhosis is autogenous, as the alcohol deranges the stomach, from which there is absorption of imperfectly digested substances, to which the cirrhosis is due.

Auto-infection must not be confounded with auto-intoxication. In the case of pulmonary tuberculosis, the person may swallow the sputum and thus cause the disease to appear in the digestive organs. This would be an example of auto-infection. The poisoned state of the blood in a case of cirrhosis of the kidneys would be an example auto-intoxication. Among the forms of auto-intoxication the following may be mentioned :

(1) The digestive organs may perform their work imperfectly, and undigested products find their way into the system. These products will fail to nourish the tissues of the body, and may act as irritants as well.

(2) Some of the secretions and excretions of the body are poisonous when brought into contact with tissues to which they have no normal relation. Normal bile will digest the cells of the pancreas, but has no such effect on the cells of the liver.

(3) It is the duty of certain organs to prevent the entry into the system of some deleterious matters. Thyroid gland may act this way. When normal it prevents the introduction into the tissue of an excess of mucous, the condition found in myxœdema. In like manner the liver separates the bile from the fluids circulating through it.

(4) The retention within the system of products that should be eliminated may cause disease. The absorption of retained effete matter from the intestines, of substances which the kidneys should excrete, and the absorption of bile in jaundices are instances.

(5) Certain cells in the body, at some periods of life, fall out of harmony with other groups of cells. This may happen at puberty, the climacteric, etc. When these cell groups no longer work together auto-intoxication may result.

(6) Under some conditions, certain cells fail to utilize some forms of foods. In diabetes, the cells that absorb and utilize sugars are no longer able to do this. The sugar acts as a poison in the system.

(7) Some of the cells in the body produce energetic poisons under certain conditions. Oxy-butyric acid, methyl mercaptan, hydrogen sulphide, and leucomain alkaloids belong to this class. It has only been possible to indicate a few of the excellent features of the book. The authors are to be heartily congratulated upon the results of their labors. They have produced a work that ought to be in the hands of every practitioner. There is nothing else to take its place.

The publishers have done their part well. The paper is a great improvement on the hard, stiff, glazy paper so often used in medical books.

## CORRESPONDENCE

*The editor does not endorse nor hold himself responsible for the opinions expressed by correspondents.*

BRANTFORD, Ont., Sept. 15th, 1902.

EDITOR CANADA LANCET :

DEAR SIR,—In the September number of your journal is a letter from the pen of Dr. L. S. Oille of St. Catharines, in which he laments the fact that “not a work is mentioned in the annual announcements of the

Canadian Medical Colleges written by a professor in any of those colleges." While joining in Dr. Oille's regret at the paucity of Canadian medical literature, I would humbly submit that the above statement is somewhat inaccurate, and as proof would refer to the list of text books given on pp. 96-97 of the calendar for 1902-1903 of the Medical Faculty of McGill University, where in physiology, the well known "Text-Book of Animal Physiology," written by Dr. Wesley Mills, Professor of Physiology in that institution, is the recommended work. Again in surgery the "American Text-Book of Surgery" is recommended, and readers of this work will remember with pleasure the article on "Hernia" from the pen of Dr. Francis J. Shepherd, the distinguished Professor of Anatomy at McGill.

Moreover what Canadian practitioner does not regard with pride the fact that, though Dr. Osler is no longer a Canadian professor, his work on the Practice of Medicine is in a large extent the embodiment of his experience gained in the wards of the Montreal General Hospital. Let us not, then, take too pessimistic a view of the matter, since these three examples show at least that experience gained in Canadian hospitals is more than sufficient for the ground work of scholarly writings.

Yours truly,

E. R. SECORD.

## MISCELLANEOUS.

### THERAPEUTIC EXPERIMENTS WITH SALOQUININE.

**E.** HOENIGSCHMIED, M. D., Weistrach, in the *Aerzliche Central-Zeitung*, No. 26, 27, 1902, writes that Saloquinine is a combination of quinine with salicylic acid, and differs essentially from the salicylate of quinine in its composition and effects. Its formula is:



It forms white crystals which are insoluble in water and are completely tasteless.

I have had occasion to test saloquinine in sciatica, menstrual colic, nervous headaches, and acute and subacute articular rheumatism.

In a case of chronic sciatica doses of 30 grains, twice daily, produced no material relief, and were therefore given three times daily. The action of the new drug was increased if given in a cup of tea with the addition of a little rum. Within a short time a feeling of comfort manifested itself, accompanied by a gentle perspiration, which was followed by a subsidence of the pains. On the second day of its administration a very slight salicylic acid and quinine effect made itself manifest. After the third day the remedy could be given in weaker doses, 15 grains, twice daily, after which the by-effects subsided.

In the second case of chronic sciatica in which the patient had been confined to bed for six months, the action of the drug was really surprising. As the pains were most violent at night and prevented the patient from sleeping, I ordered 30 grains to be administered at five o'clock and the same quantity at nine o'clock in a cup of tea. Soon after taking the second dose slight perspiration and a diminution of the pains occurred, and the patient obtained a quiet sleep during the second half of the night. The subject of this case was a man, 45 years old, who was much reduced in health, emaciated, and anemic. The affected leg was much weaker than the right. He had no appetite and suffered from protracted constipation. The pulse was 130 per minute; temperature 36.5 C. He complained of a feeling of heaviness in the head. On the following day I ordered saloquinine to be continued in the same dose and also prescribed podophyllin with cascara and rhubarb in order to regulate the bowels. The pain was less violent than before and of shorter duration, and the patient slept well during the night. He had a movement of the bowels, but the appetite was still completely lost. On the third day of treatment some tinnitus and deafness were present, but not as violent as after the use of salicylic acid or quinine. On this account instead of 60 grains daily only 30 grains were administered in the evening about eight o'clock. This dose sufficed to prevent the recurrence of the violent pains, although traces of them manifested themselves during the following fourteen days. After the remaining pain had been reduced to a minimum the dose was decreased to 15 grains daily, which was continued for eight more days. The tinnitus and deafness, however, did not disappear until three days after discontinuing the drug. To stimulate the appetite and remove the anæmia condango and iron were administered, and under this treatment the patient gradually recovered.

The third case of sciatica was that of a woman, 32 years old, who stated that she frequently suffered from this malady, the attacks lasting several weeks at a time. She was of vigorous build, and, aside from the attacks of sciatica, which occurred several times a year, she always felt well. When this patient came under my care she had been confined to bed for four days, and during the last two days menstruation had appeared and was quite profuse. As the pains appeared only at night. I ordered 15 grains of saloquinine to be taken at four o'clock in the afternoon and nine o'clock at night. At ten o'clock the backache and sciatic pains had subsided, and the patient passed a good night. The menses were quite moderate on the following day and free from pain. During the evening saloquinine was given in the same doses as before, and the recurrence of the pains was almost completely prevented. This led the patient to believe that she was cured, and she therefore failed to take

the drug on the third day. In the evening at 9.30 she had another attack of pain, and immediately took two powders, which afforded relief in the course of one-half hour, although during the night she was restless. The next two days she took 60 grains, and then for three more days 30 grains, after which a cure resulted.

Some very satisfactory results were obtained in menstrual disorders. After a dose of 30 grains the violent sacral pains subsided in the course of one-half hour, and the hæmorrhage became less profuse than before. Sometimes the dose had to be repeated once or twice, but in many cases a single administration was sufficient. The drug is decidedly beneficial in profuse menorrhagia, whether attended with menstrual colic or not. In profuse hæmorrhages it is my custom to administer 30 grains, morning and evening, for three days, and keep the patient in bed. Of course, hot and stimulating foods and drinks must be entirely avoided.

In trigeminal neuralgia saloquinine also proved of service in doses of 30 grains, twice daily.

Contrary to the observations of others who stated that they had never noted the by-effects of quinine and salicylic acid during its use, I have always observed under doses of at least 60 grains slight deafness and tinnitus on the second day. The remedy is certainly destined to be utilized extensively as an antineuralgic.

Although saloquinine is absolutely tasteless I have always prescribed it in wafers, since it is insoluble in water.

#### EXPERIMENTS WITH ADRENALIN.

**E**LSBERG, in *American Medicine*, gives a very comprehensive report of a series of experiments with adrenalin chlorid as an addition to solutions for local anesthesia. He says: "Adrenalin chlorid, which is the active blood pressure-raising principle of the suprarenal gland recently discovered and investigated by Dr. Takamine, is now on the market as an amorphous crystalline powder or in the form of a 1-1000 solution. It is a powerful astringent, so that a drop of a 1-10,000 solution will blanch the conjunctiva in from 30 to 60 seconds.

"Elsberg has been carrying on a series of experiments with this new drug and finds that if a drop of a 1-1000 solution be injected under the normal skin a slight burning sensation is felt but no anesthesia occurs. Within one minute an area of skin about two inches in diameter becomes blanched and almost bloodless and remains so from six to twelve hours. The same effect will be observed if a 1-500 to 1-15,000 solution be used, but with these weaker solutions the blanching appears only after a few minutes and disappears after three to six hours. After the blanching of the skin disappears the tissue apparently returns to its normal condition, No deleterious effects such as sloughing or subcutaneous ecchymosis ever

followed these injections. In the course of the investigations cocain and eucaïn solutions containing adrenalin the proportion of 1-5000 to 1-20,000 were used. It was found that the anesthetic properties of the cocain and eucaïn were preserved while the adrenalin caused the same blanching of the tissues as previously observed, which extended one to two inches beyond the area infiltrated.

"In performing minor operations under cocain to which 1-5000 to 1-20,000 adrenalin had been added only the larger vessels bled when cut across. The smaller vessels were contracted so tightly that no blood could escape from them and therefore there was no oozing. It was unnecessary to sponge off the wound a single time during an operation. The healing of the wound was not interfered with in any way. Upon theoretical grounds it was expected that secondary hemorrhage would take place in from three to twelve hours as the effect of the drug passed off. This, however, has not been the case in the 30 cases operated upon. Experience with the drug is still small, and what will be the result in operations upon larger wounds remains to be determined.

"For small operations the addition of adrenalin chlorid is of distinct advantage in that it raises the blood pressure and overcomes the depressing effect of cocain, at the same time it entirely does away with the oozing of blood from the wound."

In genito-urinary work the writer has used adrenalin. It checks hemorrhage, but in several cases it was followed by secondary hemorrhage, rather free. Its use is now limited to circumcision in very young infants, and it is there applied in very weak solution when the open method is used.

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#### HOW SERA ARE MADE.

**O**N account of their importance in materia medica, many articles have appeared in the medical press regarding the therapeutic value of Biologic products, especially the Antitoxic sera, but relatively few giving in detail the process of manufacture. These are however, of interest to the physician.

Of first importance is the scientific skill and care that must, from the very nature of the products, surround every step in their preparation.

As Anti Diphtheritic serum has reached the highest state of perfection, and the results following its use have been so positive and uniformly successful, we will give the methods used at the present time to secure the same.

The first step in the process, is the securing of a pure Toxin producing diphtheria germ. This is done by rubbing a sterile swab over the



membrane in the throat of a child, suffering from the disease. The swab is then transferred to a tube of culture media containing Loefflers blood serum mixture (which is made by mixing blood serum with beef bouillon and a small amount of glucose and sterilizing.) This tube and swab is then placed in the incubator which is kept at 37° Centigrade and allowed to develop from twelve to eighteen hours when it is taken out and examined microscopically. If found with other bacteria present as is usually the case, it is purified by Plating on gelatin media from which the diphtheria colonies are picked with a sterilized platinum wire, and transferred to flasks containing beef bouillon (made from prime lean beef with peptone and salt added and made alkaline by the addition of Sodium Hydrate).

These flasks are also put in the incubator at 37° C. and remain for seven to fifteen days. At the end of this time they are removed and examined to insure the purity of the culture. If found pure a small amount of Trikresol is added as a preservative.

The bouillon which contains the toxin is now tested for strength on guinea pigs to determine the minimum fatal dose for a guinea pig of known weight. After this is complete the toxin is ready to be injected in the horse.

The horse is another important factor in making serum. Animals five or six years old are selected by a Veterinarian to insure their healthy condition, but to be doubly certain, they are injected with Tuberculin and Mallein to see that they are free from any latent form of Tuberculosis or Glanders.

After all these precautions have been taken they are given an initial injection of the toxin which usually causes a rise of temperature and other symptoms which subside in a few days. When the animal has completely recovered he is again injected with an increased amount of toxin. This process is repeated again and again until at the end of five or six months the horse is immunized, taking many hundreds of times the amount of toxin given at the first injection.

Now the horse is bled from the jugular vein by inserting a trocar and allowing the blood to flow into sterile containers. These containers are placed in the refrigerator where the serum separates—and is syphoned off into sterile bottles and Trikresol added as a preservative.

It is now ready for the test for Antitoxic strength and bacteriological and physiological tests. The first is made by giving guinea pigs one hundred fatal doses of toxin and a small amount of the serum from an immunized horse. Depending on the amount of serum necessary to protect the guinea pig from death the number of antitoxic units is calculated.

The bacteriological test is made by making plants into various kinds of media and the physiological by injecting guinea pigs with large amounts of serum. If the antitoxic strength of the serum is up to the standard and the two other tests negative, the serum is filtered and ready to be put up in bulbs, labeled with the number of units contained in each. The process of making Antistreptococcic serum is practically the same as for diphtheria, the only difference being that live or attenuated cultures of the streptococcus organism are used.

To Messrs. Frederick Stearns & Co., who have one of the most modern and thoroughly equipped laboratories for producing sera, vaccine, etc., specially constructed for this purpose, belongs the credit of having produced a serum of the highest quality, and having placed it on the market in a hermetically sealed bulb of such form that it may be converted at once into a perfectly sterile syringe by simply breaking the ends of the bulb and attaching a sterile needle and rubber bulb, each of which accompanies every package.

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#### FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

To those who intend taking part in the International Medical Congress, to be held in Madrid in 1903, the following terms of travel have been arranged: Railways in France and Spain, 50 per cent. reduction; the Spanish Transatlantic Company, 33 per cent.; and the general Italian Navigation Company, 50 per cent., exclusive of meals. Those who intend contributing papers should communicate this fact to the general secretary at Madrid by the first of January, 1903, or to Dr. J. H. Huddleston, 126 West 85th Street, New York.

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#### JOURNAL OF ADVANCED THERAPEUTICS.

Electro-Therapeutics, Radiography, Thermo and Hydro-Therapeutics are practically and thoroughly covered in the Journal of Advanced Therapeutics 800 pages, issued monthly, \$3 per year.)

The reader is invited to join the "Founders" Club, and to all who order during 1902 the price is \$2, for the first and *each succeeding* year. It is only requisite that you address following order to "Advanced Therapeutics," 156 5th Ave., New York. Send me until countermanded (to Dec. 1902 free) the Journal commencing Jan. 1903, per year \$2., for which I will pay at the close of the year.