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UNIVERSITY FACILITIES: STUDENT DUTY.*

BY A. MCPHEDRAN, M.B.,

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IT is with much reluctance and misgiving that I appear before you to-night as the representative of the University and Faculty. However, in obedience to their behests I am here, in the first place, to welcome the students who return to us as well as those who appear in our halls for the first time. And in the second place, in the name of the Faculty, to offer some words of counsel to you.

By many such occasions as this are looked upon as a 'useless formality that might be dispensed with without disadvantage or loss. For this evening at least I am inclined to believe this is quite true. It will be conceded, however, that by such occasions as this the opportunity is given to make formal pronouncements on certain questions bearing on medical education,

* Address at the opening of the Medical Department of the University of Toronto.

or questions of general interest relating to medicine, and, at the same time, to impart words of advice and encouragement to students in the difficulties and trials that beset their path. It is not my purpose to occupy your time to-night discussing any question of medical politics, but to draw your attention to the advantageous circumstances under which it has fallen to your lot to pursue your course of study and preparation, and to offer some suggestions as to the best means to reach the end you have in view. I have no doubt you have all given full consideration to the subject before coming to a decision on your present course. That you may enter intelligently on your choice of a career it is important that you understand its nature and the demands that it will probably make upon you. For a full and lucid exposition of the present status and of the future prospects of medical science and practice, I commend to your careful study the opening lecture delivered two years ago by Prof. A. B. Macallum. It will well repay each of you to give careful consideration to the questions therein discussed, as thereby you will be enabled to form a clearer and more comprehensive conception of the scope of the science of medicine, the great advances being made, and yet to be made, in it, and the directions in which new discoveries and advances are likely to occur. It will give you a clearer idea also of the requirements necessary to equip you to bear an honorable part in those advances and the requirements equally necessary for your preparation for the discharge of the more prosaic duties that will devolve upon you in the career which you have chosen. It is of the greatest importance the ideal you form of your profession—its standing, its needs, the demands it makes on you, and the spirit in which you should meet these demands. This is all of the utmost consequence because your true success—success measured by results accomplished—will be in proportion to your ideal.

After some references to the provisions made for such a scientific course, my remarks to-night will pertain chiefly to the spirit in which you should apply yourselves to your work, to incite you to the contemplation of high ideals, and encourage you in the arduous task of their accomplishment.

THE UNIVERSITY AND ITS EQUIPMENT.

Then, first, let me direct your attention to the advantageous circumstances under which you are to pursue your careers as students, and congratulate you on your choice of an institution in which to enroll yourselves. The University of Toronto has always been foremost in elevating the standard of education and in improving the facilities for instruction. For many years there has been no important reform in medical education in this province that has not had its origin in this university. It is to this advanced university spirit that you owe the splendid series of laboratories

in which it will be your privilege to pursue your practical work in the various departments. These laboratories have been the admiration of all visitors, even those from the greatest universities on both this continent and in Europe. This year the new chemical laboratory has been added—a laboratory of the amplest accommodation and most liberal appointments. Professor Pike is to be most heartily congratulated on such a complete fulfilment of his wishes in this laboratory, for which he has so long labored and waited. I regret that he could not be prevailed on to deliver the opening address on this occasion; it would not only have been appropriate at the inauguration of his new laboratory, but would have afforded the opportunity for discussing the increasing importance of chemistry in its relation to medical science. Extensive and well-equipped as these laboratories are, there is nothing superfluous about them; anything less would cripple their usefulness. Were funds in hand, the university authorities would have no difficulty in using it judiciously in increasing the efficiency of the present laboratories, and in adding to their number. It requires but a cursory examination to convince any one that such facilities are possible only to a largely endowed institution—no private corporation could make such provision for the training of students in medicine or other scientific course. No such provision exists anywhere in America apart from large universities, and nowhere else in Canada are such facilities to be found. The natural outcome of extensive laboratory facilities is the development and increase of laboratory teaching and demonstration on an equivalent scale—the one keeps pace with the other invariably.

THE CURRICULUM.

In regard to the question of the course required by the university, it is important that you view it in a proper spirit. Students too often cultivate, unconsciously perhaps, a spirit of antagonism to these requirements, especially if they extend beyond those usually demanded elsewhere. They feel as if these requirements were largely useless, and imposed on them to please those placed over them in these matters. The feeling is often one of resentment, as if the work prescribed were a measure of punishment, and therefore unjust. They forget that for every demand made of them the university makes provision by which to prepare them to meet these demands. It is not only a demand on the student that he shall learn a certain amount, but also on the university as well that she shall provide instruction in that work; so that every requirement means, first, a demand on the university to provide the increased facilities, and only after that that the student shall make use of these facilities for his own development. It is a question of profit and loss—profit for the student and loss for the university. Viewed in this light, every advance in the curriculum means

a gain to the student of so much more training, and should be received by him with approbation rather than criticism.

With the exception of the Johns Hopkins University, no other institution on this continent affords her undergraduates in medicine so extensive a course of training as does the University of Toronto. In no department is her course less complete than in the most advanced institutions, while in some of the subjects, as biology, it is much more advanced. Few institutions afford any instruction in biology and embryology; with the exception of Queen's University no other in Canada does so.

Here I would like to give public expression to my high appreciation of the science course given in this university. Among our best graduates are always to be found those students who have taken an honor science course. All these students stand high; the four years' course in honor science work forms an excellent foundation on which to build a course in practical medicine. In speaking so highly of the scientific, I do not wish to be understood as undervaluing literary training for the student in medicine; if the whole truth must be told, no class of students stand in greater need of more liberal literary training. All knowledge is useful to the physician, as to other people, in making him not only a better physician, but a more capable man. But the course in science has a direct bearing on the education in medicine—is an integral part of it, in fact. It trains the powers of observation and interpretation of natural phenomena. By having a thorough knowledge of the development, the structure of organs, and the physical laws by which they perform their functions, the physician is much the better able to understand diseases of these organs and the derangement of their functions. No physician can be thoroughly qualified for the performance of his duties with that power of appreciation of the demands that are made upon him if he has not had considerable training in those subjects, such as all the undergraduates in medicine in this university get in their first and second years. The course of the honor science graduate, being more full and complete, gives him greater power to advance in the science of medicine and its practical application, not only in his undergraduate course, but, what is of more importance, in his post-graduate work as well.

I may seem to you to have dwelt at rather great length on the advantages placed at your disposal, and the superior facilities provided for your instruction. My reasons for occupying so much time with this matter are, first, to make you duly sensible of your very great privileges, that you may make use of them with the greater zeal and enthusiasm—an enthusiasm bred of the conviction that your privileges are equalled by few and excelled by none, and that will stimulate you to your best endeavors, if your motives are high and honorable, and not sordid and selfish; and, in

the second place, with a view of nurturing in you, as well as ourselves and all her graduates, that ardent attachment to our university which all her sons should cherish. I would have you leave her halls imbued with a high spirit of loyalty—a loyalty based on the knowledge of her superiority, as well as on the strongest sentiments of attachment to her as your *alma mater*. As Canadians, we would be the better of a louder proclamation of our loyalty to our university, as well as to our country. I do not mean to impugn our loyalty to our country, but I sometimes think that our university would be strengthened and her usefulness increased by a more ardent love on the part of her sons—a loyalty at least equal to her merits. I think this is true, especially of the medical graduates ; but it is gratifying to feel, as I do, that the sentiments of attachment among recent graduates in medicine are much stronger and growing in strength every year. I do not think the zeal of any graduates is greater for the interests of the university than that of the graduates in medicine in recent years.

EIGHT MONTHS' COURSE.

On account of the great and growing amount of work in each year of the medical course, and with a view to increase the efficiency of the course and, at the same time, somewhat relieve the burden laid at present upon the students, the faculty have been discussing for some time the desirability of lengthening the session to eight months. At the last session of the Medical Council, we laid the matter before that body, and asked to have it adopted, and we hope the change will be made next year. There would be no increase in the number of lectures over that now required in the six months' session. It will at once be seen that there would be much more time for recreation and private study. At present the time-table calls for about eight hours per day attendance on lectures and demonstrations in each year—that is, from 9 in the morning till 5 or 6 in the evening, with an hour's respite at noon. With anything like proper application during so many hours, the strongest student will be so fagged as to be in but poor condition for the reading that has to be done in the evening before retiring to rest. Then there is no regular time at the students' disposal for proper recreation, without which the health of the most robust must, and does, suffer, as proved by the wan faces and exhausted mien of all the conscientious workers of every class when the time for the spring examinations arrives. The want of proper regular recreation, together with long hours of study in badly-ventilated rooms, does more to injure the health of students than even the hard work they have to do. The lengthening of the session should enable us to remedy these defects in a large measure, and make the course much more efficient.

STUDENT DUTY.

Thus far I have spoken only of the university side of my subject; let me now offer you some words of counsel and encouragement for the work which lies before you. It is proper to remind you that the course of study on which you have entered does not, at least should not, terminate with your graduation. Graduation is but the portal to more advanced study, combined with practical work. Your undergraduate course is the preparation for the duties of the physician—duties that combine the practical life with close, unremitting study, not of books only, but of actual phenomena in health and disease, as well as of that broader field of general knowledge which is the common heritage of all. The days of your pupilage here are the preparation for the graver problems which will daily confront you in the more arduous studentship of your post-graduate career. This is the view of your life work I would have you cherish. It is not the view, unfortunately, that the majority of students have; too many of them look upon the graduation as the goal, imagining that then they have learnt all, that nothing is left but to apply their knowledge, and so they fall behind in the race, becoming reduced to the rank of routine practitioners. Even were it possible to learn all that is known of medical science up to the time of graduation, the necessity for subsequent study would be none the less because of the daily advances that are being made in all branches of medicine. I know you all acquiesce in these statements, and I make them not to overwhelm you with the magnitude of the undertaking on which you have entered, but to encourage and stimulate you to lay deep and well now the foundations on which to build your life's superstructure, and to assure you of success if the means placed at your service are wisely used. In view of the magnitude of the work that lies before you, it is of the greatest importance that you form the habits of work that will most conduce to your success, now as students, and then as student physicians. Man is the incarnation of idleness. We love to take our ease, and this love urges us to procrastinate present duty—to-morrow is ever full of golden deeds. It is only by a constant moral struggle that we can keep ourselves at work as we should, and forego the ease and pleasure that are so agreeable to our feelings. There are exceptions to this rule, but not many—we wish we belonged to them. To prepare for a life of diligence, we must form those habits that will compel us always to do the duty that lies before us. Habit becomes second nature, and we need to make it the strongest nature in order that it may overcome the dilatoriness of the first nature. Such discipline requires much self-denial, but it is comforting to remember that it grows easier with practice.

First amongst these habits I would place the power of *mental detachment*. By that I mean the ability to detach the thoughts from everything

outside of the matter under consideration. To put the same in a positive way, so far as work is concerned, it means the concentration of the mind on any subject engaging the attention. Such concentration means unconsciousness of all else than the subject of consideration. A mind so controlled might be compared to a search-light. In such a light none of the rays are lost, but all are turned on the object of search. So it is with the mind under complete control, none of its power is dissipated on extraneous subjects, but its full power is turned on the subject of investigation. The most successful students I have ever known have been those with such control over their intellects. I remember a brilliant one who could read Gray's Anatomy, for example, amidst the conversation of four or five people as if he were alone ; he was quite unconscious of their presence so long as he wanted to read. It is of the utmost importance to acquire this power—all can do it. Intellects vary in power as much as lights do, but whether you possess mental power comparable to the light of thousands of candle-power, or only feeble as a rush-light, the same necessity is laid upon you to control your minds so as to be able to concentrate them on whatsoever subject you please. The most giant intellect cannot do justice to his powers without such control, and on the feeble mind is the necessity more urgently laid. Not only in the prosecution of your studies will you find mental detachment essential to the highest success, but in the active pursuit of your professional career, as well as in the social amenities of daily life, it will be equally conducive to success and pleasure. The want of interest so common in ordinary conversation is usually due to the wandering of the mind. Few people are able to control their minds sufficiently to make them interesting listeners ; their eyes as well as their minds wander, and you cannot help wishing their personalities would go also, and relieve you of the necessity of trying to amuse or edify them. A few days ago, in speaking of a mutual friend, a lady said to me that "he always seemed, when talking with you, to be wholly interested in you and your conversation, and cared for no one else in the world. I know," she said, "it is only his way, but it is very pleasant to meet such a one." People love sympathy, and the more attentive you are to their remarks the more you enter into the spirit of their feelings, and the more they become attracted to you. You can easily see how potent this would render your influence as a physician—potent in your influence for good, and, if you wish to put it on a lower level, potent for your own material success.

In order to possess this faculty well developed it must be practised constantly ; the mind must be always kept in hand, so to speak, and attention compelled where you will, even to listening to the stupidest lecture, the dullest sermon, or the most uninteresting page of reading. Anything less than this means the crippling of the power of mental control.

To practise such mental detachment means hard work—it means that all work shall be hard because all shall be done with active concentration of mind. But it means also successful work—successful to the fullest capacity of the individual mind. Not only so, but the accomplishing of the greatest amount of work in the given time. Nothing will economize time so well. Work done with such concentration of thought would seldom, if ever, be forgotten. Have any of you forgotten the incidents of your lives that wholly engrossed your minds—even the little things, whether of pleasure, of fear, or of shame? Could we work with such mental concentration, how rapid would be our growth in knowledge! Repetition is the essence of success in teaching; then it would be repetition, with added facts only, that would be needed. With proper regulation, of the time for sleep and recreation, such systematic occupation of the mind is the surest safeguard against pessimism. The duties of the present would so engage the faculties that there would not be opportunity to unduly magnify the difficulties of the future. Carlyle has somewhere said that “your business is not to *see* what lies dimly at a distance, but to *do* what lies clearly at hand.” To *do* what lies clearly at hand—that is the lesson that all of you as students stand in greatest need to learn. So many read and work in such a distracted fashion that they grasp but little, and, in the medley of their thinking, soon lose that little. I deem this power of mental detachment of such vital importance that I urge you to practise it in all your work of the lecture room, the clinic, the laboratory, and, your study—it will enable you to accomplish more than you ever conceived possible even in your most extravagant moods; carry it with you into the examination hall, and it will banish all nervousness, because it will enable you to become oblivious of the examiner and the ordeal in the mental concentration on the subject; carry it with you into your recreation hours, and you will be the happier in forgetting the future in “doing what lies clearly at hand”; carry it with you into your social life, and you will enjoy the full measure of enjoyment that friends have to impart, while, to the extent of your power, adding to their happiness.

As students, as physicians, as men of the world, or whatever you be, to your mental detachment add the *methodical habit*. Your lecture and laboratory work is arranged for you; regulate your reading hours as carefully—each hour its own work. This will beget in you the *methodical habit*, that, with care, will never forsake you, even in the irregular and incessant demands that will in due time be made upon you as busy physicians. The public can be trained to respect your habits of regularity; see to it that you make them so regard your time for work as well as sleep that only the direst necessity would impel them to trespass upon them. This may be ideal, but not until physicians do this will they prepare themselves for the proper discharge of their duty.

But the *methodical habit* extends further and to more important ends—it extends to careful and systematic observation as applied to the daily round of work. The origin and growth of all the sciences have been due to the concentration of the mind in methodical observation. This is true of biology, chemistry, physics, botany, and, in fact, of all the sciences ; it is no less true of medical science. It is often charged that medicine has not reached the status of a science. This, in a sense, is true ; it is rather a system of sciences and their application to a particular purpose. As none of the sciences on which medicine rests are complete, but are daily making giant strides in advance, as, for example, physiology and chemistry, it should be no opprobrium to medicine to say it is not exact. The difficulties to be overcome before making it exact are infinitely greater than are those to be overcome in making any of the natural sciences exact. Medical science has to do with man in health and disease. The subject is an ever-varying one, shifting as the sands by the seashore—yea, as unstable as water. In the management of him principles have but a general application; in the details each is “a law unto himself.” By patient study and careful observation medicine has attained its present advanced position, but much remains to be done—more than the most learned has any conception of. The further advance must be made as the past progress has been—by collecting fact upon fact, here a little and there a little. Accurate observation becomes, therefore, the foundation on which all further progress must be made. The power to observe accurately is one that almost every one thinks he possesses. Few things annoy people more than to question their report of what they have seen, yet scarcely any two see alike. The faculty of accurate observation is seldom found except as the result of special training. What ordinarily passes for observation is a combination of observation and assumption, the latter often predominating. Too often we see a little and take the rest for granted. This is the reason that medical opinions so often differ.

Accurate observation implies mental detachment, and this, in turn, implies an unbiased mind. This is the mental habit we would have you cultivate. As teachers appreciating the best means for you to reach the goal of true success, we wish your minds to take an active part in the work of their own development. We do not wish you to sit at your teachers' feet and be docile recipients of dogma and precept without reason, however eminent the authority ; rather, we invite you from the first to use your own eyes, your own hands, your own ears, and your own powers of criticism and judgment. Our aim is to see you not only learned physicians, but self-reliant, capable men, “ready to give a reason for the faith that is in you,” and men on whom others may rely with confidence. The value of experience consists not in observing *much*, but in observing *wisely*. One

case of any disease thoroughly mastered may do more to train your powers of observation than the freedom of the largest clinic. Sir William Jenner has said that "there are men who have had a great deal of practice and are still very inexperienced." There are men, especially amongst those who have been early placed in charge of large numbers of patients, who because they have treated many people, and comparatively few of their patients have died, are satisfied with their imperfect knowledge. In truth, such men mistake self-deception for experience.

In this connection I beg to warn you against what may be called the "besetting sin" of the student—at least *one* of the besetting sins—that is of saying "yes" when they should say "no"—to say they see a thing, they hear a thing, they feel a thing, or understand a thing, when they do not. "You are *not* guilty because you are ignorant; but you *are* guilty when you resign yourselves to ignorance" (Mazzini). Be such ardent seekers after truth, so concentrating the search-light of your mind on the effort, that the idea of shame for ignorance cannot occur to you.

To the qualities of mental detachment and the methodical habit, all that needs to be added is the habit of thoroughness to make you successful students. It seems almost unnecessary to add this, because one could scarcely practise mental detachment without being thorough. It is a matter of such vital importance to the student, however, that it can scarcely be pressed on your attention with too great urgency. Want of thoroughness in reading, listening, and observing in students, is pressed on our attention with sad monotony. How often students misquote what they hear or read! There is a sad waste of energy due to the lack of power to work with concentration of mind and of method. It was by the practise of these qualities that all the great epoch-making men have risen to fame. It was so with Hunter, in his discovery of circulation; with Simpson, in the introduction of chloroform; with Lister, in the creation of aseptic surgery; with that famous scientist who has just died, Pasteur; with Koch—all geniuses because all thorough workers. In a recent article a writer says "that the tragedy of to-day is not the tragedy of the criminal, but of the incompetent; not of the absolutely incompetent, but of the relatively incompetent. It is the tragedy of the man who has the best intentions and the best character, and a fair equipment for his work, but who has not a thorough equipment, and who cannot do the thing he starts to do in the best possible way. Society is crowded with half-equipped workers, with men and women who are honest and earnest, and not incapable, but who are not up to the level of the very best work."

This is as true of the profession of medicine as of any walk in life, and, I may say, especially true of Canadian medicine, in which we pride ourselves that all are well equipped—but only the few are thoroughly

equipped. The great lesson to be pressed on you and all seeking admission to this or any other profession to day is the need of absolute competency, of ultimate superiority. Let your aim be to attain that superiority.

While these faculties of which I have spoken are of the greatest importance to your undergraduate career, your years of minority, they will be even of greater moment to you when you have attained your majority. Just as the knowledge you acquire in the days of your pupilage here prepare you for the ordeal of graduation, so the training of these faculties of mental detachment, method, and thoroughness prepare you to bear your part in the more grave and onerous duties of an active professional career. Learn to look upon your graduation, not as the completion of your education, as too many do, but as the badge of qualification for freedom to direct your own work, as the portal to a wider field in which to labour. Your undergraduate training will have fallen far short of its proper aim if it has not taught you the power to mine for yourselves ; if it has not excited your hunger, and so make you the stronger to hunt and till for your own subsistence. We hear much of late years of post-graduate courses ; they had their birth in the insufficient training of the great majority of American medical schools, many of which are now vastly improved. This is a case in which good has come out of evil ; the post-graduate course has been productive of great benefit to medical science, and will be more so in the future. I would have you, however, enlarge your idea of a post-graduate course ; it should continue so long as you are an active member of the profession. Like all other sciences, medicine is daily advancing, often with great rapidity ; therefore, the maintenance of a position of excellence in it, or, in fact, in any part of it, can only be accomplished by continuous labor ; there can be no cessation. You must either grow with the growing knowledge, or fall behind in the race and become relegated to an obsolete past. It is said that the life of a medical book is three years, after which it needs rewriting to bring it up to the times. Like our books, we, too, need revision, not every three years, but constantly, to keep us abreast of the advance in medical science.

You all should endeavor to take post-graduate courses as soon as you graduate ; let nothing short of insurmountable difficulties prevent your doing so. The benefits of such a course may be very great—will be, if pursued with judgment. Many who go spend most of their time preparing for examinations for qualifications which, with few exceptions, certainly do no credit to the degree they carry with them. I may venture the assertion without fear of successful contradiction, and I hope you will all re-echo my sentiment, that there is no qualification on this continent and none in Great Britain, except the highest ones, that will do honor to the standing of one holding the M.B. of the University of Toronto. In your post-gradu-

ate course you should have two objects in view: First, to increase your scientific attainments, that is, your knowledge of facts and your knowledge of methods of work, that you may be the more capable of continuing your work throughout your subsequent professional career; and, secondly, to increase your knowledge of people. Both of these objects will increase your wisdom and your confidence in your own powers. Even in the light of material prosperity, you could not take a wiser course, because a knowledge of human nature gives great power over people. Such a course should not be confined to one centre, but the methods and people of several should be studied. This would require a year, perhaps two, at least, and necessitate a knowledge of German and French. These languages should not, however, be a grave difficulty in the way of any student with a mind trained as I have indicated. Besides, in any case, a reading knowledge of these languages is essential to the proper pursuit of medical work.

But, unfortunately, there are many, too many, who cannot go abroad for post-graduate work, or, in fact, take it even near home. These have my sympathy. There is, however, no reason to despair. Many such in the past have distanced not a few of their more favored brethren in the race, and I have no doubt many will do so in the future. If the post-graduate course should last during your whole professional life, the difference in advantages during the first year or two should not be of vital importance. Take advantage of all the opportunities at your own doors—of hospitals, laboratories, libraries, and instruction that is anywhere to be had. Even if your lot should be cast in the remote regions of the great Northwest, you can yet distinguish yourself. Jenner, Koch, and many such, were but country physicians. The times now are as ripe for great discoveries as they were in their days. For example, we are but awakening to the suspicion that the ductless glands possess great and far-reaching functions in the animal economy. This is but one field, and it lies almost a fallow ground awaiting the plowshare of the husbandman, and promising a rich harvest to him who tills. Be not discouraged if you fall short of your ideal of success; your efforts may enable some one else to grasp the prize. That is the history of every great discovery—the fortunate one but completes the work, it may be, of many others. “Not failure but low aim is crime,” wrote James Russell Lowell.

The powers of mental detachment, methodical habit, and thoroughness in work practically imply the possession of all those faculties that go to make not only successful students, but grace of character, because, with Goethe, “we would see that the little that has been done seems nothing when we look forward and see how much we have yet to do.” Such contemplation should keep us duly humble as to our own attainments, and charitable of the failings of others. Too often, however, we forget the

magnitude of what we don't know, while the magnitude of what we do know, or, rather, think we know, expands to most inordinate proportions under our admiring contemplation. This form of mental aberration is very prone to attack one just after graduation; therefore it becomes my duty to warn you against it. Be you never so wise, you can know very little more, compared with the total sum of knowledge, than the man whose ignorance you despise. The practice of our profession is one in which mistakes are too often inevitable. Much of it consists of the balancing of probabilities, nay, even of possibilities, in arriving at conclusions. Errors must, therefore, come to the wisest and most accurate observers. Remember this, and you will not be, as physicians usually are, over-sensitive in acknowledging your mistakes. The lessons of our mistakes should be our most valuable ones—always so carefully studied that we will be guarded against their repetition. "Be always displeased with what thou art, if thou desirest to attain to what thou art not," a valuable maxim for all; let it be yours, continually before you, that it may be reflected in your daily lives, urging you on to higher attainments.

To you, students of medicine, I offer my congratulations on your choice of a profession—a profession which, in the words of Sir James Paget, "offers the most complete and constant union of those qualities which have the greatest charm for pure and active minds—novelty, utility, and charity." It is not necessary that I pass any encomiums on the profession; your presence in these seats is the strongest proof you can give that *you*, at least, believe it to be the noblest profession, and the best disposition you can make of your lives.

Though noble in itself, forget not that it may be debased and put to ignoble uses. Its nobleness, so far as each of you is concerned, will be just in proportion to the nobility of the spirit in which you discharge its duties. "Pure motives and undefiled" will ennoble any calling, however ignoble in itself. Just as the widow's mite cast into the treasury was more than all the rich gave, so her work, however humble, may have been more noble than theirs, however great these may have been in the eyes of the world. Few avocations in life can be more ignoble than the practise of medicine simply for the monetary return it brings. To make it our aim to amass wealth by the ills and misfortunes of others should be repugnant to all noble minds. You may think that such moralizings are "twice told tales." True; but, as happens invariably in the history of the world, of the individual as well as the nation, material prosperity weakens the influence of ideals and increases that of the material, lowering the standard of our moral natures. Hence the necessity, as we advance in prosperity, that we keep high ideals before us, remembering, however, that, however high our ideals may be, they only have moral value as they

amend our lives. "With purity and holiness I will pass my life and practise my art" was the pledge required by Hippocrates of every one entering the portals of the profession. We have advanced greatly in science and prosperity since his day, but we have also fallen far below the ideal of the Hippocratic oath. We are the inheritors of a useful art, the heirs of a noble learning, and the depositories of a godlike knowledge. On the ideals we place before us to guide our efforts depends the influence of this inheritance on our successors. The late Professor Huxley, in one of his lay sermons, said: "Learn what is true that you may do what is right." Let this be your motive.

Your duty, now and hereafter, will bring you into close relationship with frail, suffering humanity. To succor such is the aim of your chosen profession. There will be much to try your patience and tax your endurance. Most people are naturally weak in courage and easily borne down by ills, real or imaginary. Such people are too often disagreeable at best, and, when ill, their disagreeableness is intensified. With such it will be your lot to deal. In your difficulties, forget not the Hippocratic oath, that you may do your duty in "purity and holiness." Be patient, tender, and kind to the poor no less than to those in better circumstances; even to the hospital poor be gentle, giving them no unnecessary pain with finger, tongue, or manner. This will call for much self-denial, but let the Golden Rule be your rule of conduct. In so far as you do so will you justify the title of the physician as the friend of man.

Your future will be inevitably bound up with the ideals you now entertain. The ideals I have, in a feeble way, set before you, if made yours, may not increase your material prosperity—nay, more, they may, under certain conditions, interfere with it, because they will prevent your acquiring ill-gotten gain; but they will ensure to you, in the end, a consciousness of duty well done that wealth cannot purchase. "A man's life consisteth not in the abundance of the things which he possesseth."

Even with such high purposes, you may fail to realize great objects in life, may fail to make any of the discoveries for which you have wrought with untiring industry, may fall far below your ideals; but even then you will have your reward. With Rabbi Ben Ezra, you can say: "What I aspired to be, and was not, comforts me."

NOTES IN A CASE OF BRAIN TUMOR WITH AN ACCOUNT OF ITS PARTIAL REMOVAL.*

BY J. WEBSTER, M.B. TOR.,
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ALTHOUGH the operation for the removal of a cerebral tumor is now not an uncommon one, there are features connected with the case I wish to record which, fortunately, are uncommon, and this must be my apology for occupying your time.

The patient, a married woman aged 43, was admitted to the Rockwood Hospital for Insane, December 19, 1894. The medical certificates of insanity stated that she was violent, destructive to clothing, and bent on suicide. She had been mentally deranged for about one year.

Family history, with regard to insanity, tubercle and syphilis, was good as far as could be ascertained.

Previous history. Married for nineteen years; the patient has had no children, and but one miscarriage. She was always temperate, industrious, and of a very happy disposition. Her general health was good, but there was a suspicion of specific disease.

History of present illness. During the winter of 1886 or 1887, the patient fell on some ice, striking the back of her head. There was no loss of consciousness, but she did not recover from the shock of the fall for some time. This accident had probably nothing to do with her present illness, although her husband holds it accountable for the intense headaches from which she has since suffered. These, however, do not seem to have commenced until the year 1890 or 1891. They were described as "burning pains" on the top of the head. About the end of 1892, twitchings of the left hand and arm appeared. At first slight and transient, as time passed they became more severe and frequent, and caused her to drop whatever she happened to be holding in that hand at the time, or to grip it so tightly that she could not let go. The spasms were frequently excited by the attempt to grasp anything.

About this time also she began to be troubled with inability to retain the urine, and consulted her physician, Dr. Gibson, of Belleville. To this gentleman I am greatly indebted for his kindness in furnishing me

* Read before the Canadian Medical Association, Kingston, August, 1895.

with much of her subsequent history. He discovered a fibroid of the uterus, to which he was inclined to attribute the vesical disturbance, and treated her accordingly.

During the year 1894 she was several times under Dr. Gibson's care for an ulcer of the left leg. He informs me that the headaches had become very severe, and there were attacks of giddiness which caused her frequent falls. At times there was numbness of the left arm, and the twitchings of this extremity were very distressing. He describes them as commencing in the thumb and index finger, and rapidly extending to the other fingers, and up the arm to the shoulder. On one occasion these contractions caused her to fall out of bed. There was some loss of muscular sense in the arm. The lower extremity was not affected while she remained under his care. She was becoming more childish, and there was considerable impairment of memory.

Suspecting a syphilitic lesion of the brain, the iodides were administered, but without benefit. The patient left Belleville, and in the course of two months was committed to Rockwood Hospital as insane. On entering she came under the immediate care of Dr. J. M. Forster, assistant medical superintendent, and it is to him the credit of making the correct diagnosis of the case is principally due.

Condition on admission. Patient fairly well nourished. Memory defective; ignorant of time and place. Speech normal; talks freely, making many mistakes, but frequently corrects them on afterthought. Pupils dilated, but equal, and respond to light. Lower muscles of left face partially paralyzed for motion; right angle of mouth drawn up when smiling or talking. Tongue protruded slightly to left. Motor paralysis complete in left hand and arm. Complains of giddiness, and staggers when walking. Considerable motor paralysis of left leg and foot. The calf of this leg measures one-half inch more than that of the right. Patellar reflexes exaggerated on both sides. Plantar reflexes normal. Tactile sensation normal. Taste, smell, and hearing normal. Headache continues very distressing. Tenderness on percussion, very marked over the right parietal region. Urine voided involuntarily; no albumen or sugar in it. The ophthalmoscope reveals double optic neuritis; the arteries much diminished in size and the veins enlarged. Retinal hæmorrhages present in both eyes.

Treatment. For four weeks pot. iodide was administered. The dose was increased to thirty grains, three times a day; but no improvement resulted.

She became very dull and stupid, sleeping most of the time, often not wakening while being washed, and was with difficulty aroused sufficiently to take her food. Sometimes she would fall asleep while talking.

At times, however, there would be an improvement, lasting for two or three days. Then she would be quite bright, and there was an accompanying increase of power in the paralyzed limbs.

This transient improvement pointed to a diminished intracranial pressure, caused probably by a temporary decrease in the quantity of blood in the brain. It also pointed to a vascular tumor, as is well explained in Starr's admirable work on brain-surgery, the vascular new-growth being likened to erectile tissue.

There was habitual constipation and she had frequent attacks of vomiting, accompanied by hiccough. At such times the patient was dull, and the pulse became small and intermittent.

During the third week of January, 1895, her articulation became defective, and this reached a climax on the 18th, when speech failed her entirely. Next day, however, she could talk as usual.

The only resemblance to a general convulsion ever noticed occurred on the 21st of the same month. Patient was asleep at the time and was observed by the nurse to become pale, after which there were tonic contractions of the muscles of the limbs. This was followed by vomiting. On February 5, 1895, her condition was as follows: Temperature, 98.1°; pulse, 72; respiration, 17. Speech, smell, taste, and hearing, normal. Sight had failed. Pupils unequal, the right being dilated. Headache in the old location unabated. Considerable tenderness on percussion over the right parietal region.

Sensation. Dulling of tactile sensation in left fingers, but in all other situations, normal.

Motion. In left upper extremity slight motion existed in fingers, at the elbow, and shoulder. Wrist entirely paralyzed. All motions of lower extremity diminished, but none entirely absent. Left lower muscles of face partially paralyzed. Urine still voided involuntarily. The *diagnosis* was made of a cerebral tumor, pressing on or involving the cortex, and probably the sub-cortical tissue in the region of the right fissure of Rolando, commencing principally in the motor centre for the thumb and index finger.

The *general diagnosis* of cerebral tumor of the right hemisphere was made from the following data: Persistent headaches for several years; vertigo and falls; failing mental powers and loss of memory; stupor; vomiting; double optic neuritis; history of convulsive muscular twitchings of left hand, followed by partial paralysis of motion, going on to almost complete left hemiplegia, and the gradual progress of these symptoms.

The *localization* was determined from the following: The course of the convulsive twitchings, commencing in the thumb and index finger, and

extending in order to the other fingers, wrist, elbow, and shoulder, exactly corresponds to the arrangement of the motor centres for these parts in the cortex of the brain around the fissure of Rolando. Also the course of the slowly progressing paralysis of these same parts, following the same order and afterwards involving the lower extremity and face, is explained in like manner. The tenderness on percussion over the right parietal region, the absence of sensory paralysis, and the slow progress of the disease, all point to a primary cortical lesion as against one of the internal capsule.

At a consultation of the staff of the hospital, it was agreed that an operation for the removal of the tumor was justifiable, and, permission having been obtained from the patient's husband, she being in good physical condition, on February 10 her head was shaved and thoroughly cleansed, and prepared for operation next day.

The operation. The head was again thoroughly cleansed, and the patient put under chloroform by Dr. Forster, $\frac{1}{8}$ grain morphia, as recommended by Horseley, having been given a short time previously.

Drs. Clarke and Anglin were also present, assisting. The fissure of Rolando was marked out by Thane's method and a \cap -shaped flap, two and one-half inches wide and deep, was raised in such a position that its posterior superior angle was situated one-half inch behind the upper end of the Rolandic sulcus. Hæmorrhage, although profuse, was easily controlled by pressure forceps and hot water, the larger vessels being ligated.

It was not desired to save the periosteum. With a one-inch trephine two buttons of bone were removed, and the intervening bridge, one-quarter inch wide, was cut away with forceps. The skull was five-sixteenths of an inch thick and very hard, being composed almost entirely of compact tissue. Three smaller buttons were then removed with a three-quarter inch trephine, and the several apertures united as before, with forceps. The larger trephine was discarded because of its inferior construction. The opening thus made measured $2\frac{1}{4} \times 2\frac{1}{2}$ inches.

No hæmorrhage from the diploë was encountered. The dura mater bulged excessively, and there was marked pulsation of the protrusion. The brain beneath could be seen to be very dark in color, and two large tortuous veins were visible coursing over its surface.

This stage of the operation had only been reached after one and a half hours' hard work. The patient's pulse had become erratic, and, as from the appearance of the brain there was a bright prospect of considerable hæmorrhage being encountered when it should be cut into, it was decided to finish the operation at a later date. Accordingly, all bleeding having ceased, the flap was replaced and sutured, but no drainage-tube inserted, the head dressed antiseptically, and the patient returned to bed.

It is not intended to recommend the slow and tedious method em-

ployed in opening the skull. It was only adopted from necessity, no other instruments being available at the time.

Next day, February 12, the temperature attained its highest point, 100.1°; pulse, 96; respiration, 15. By February 15 the temperature, pulse, and respirations were normal, and the patient bright and cheerful. There was no change in the paralysis of the left side.

Nothing of importance occurred until February 18, when the second part of the operation was performed. Morphia was given as before, and Dr. Forster again administered chloroform.

The dressing, which had never been removed, was now taken off, and the wound found to have healed by first intention. The stitches were taken out, and with the handle of a scalpel the flap was easily raised, no hæmorrhage occurring. It was found greatly thickened; a large clot of blood rested on the dura mater. On wiping this away, the brain was seen to bulge and pulsate, and have the same dark appearance as before. Two of the larger meningeal vessels were ligated and the dura incised a quarter of an inch from the margin of the bony opening, forming a flap which was reflected downwards. So great was the intracranial pressure that, with the first incision of the membrane, the brain forced itself through the opening made, becoming torn in so doing. There were no adhesions.

The fissure of Rolando divided the exposed brain into an anterior and posterior half, the ascending frontal and parietal convolutions being well exposed. Everywhere the cerebral substance presented a mottled, bluish-black appearance, nothing resembling normal brain tissue being visible. On palpation there was no resistance in any situation. That portion occupying the lower third of the opening—the area governing motions of the wrist and hand—was darker and more diseased in appearance than any other.

The conclusion was come to that the condition was one of an infiltrating growth, involving a very large area, and that to remove it all would be impossible, no matter how large the bony opening should be made. It was, therefore, decided only to remove what was possible through the opening as it existed.

The large Pial veins were tied, and with knife and spoon about one and a half ounces of diseased brain tissue were cut or scooped out. In consistency it resembled soft butter, so that any dissection was difficult. Hæmorrhage was troublesome, but not alarming. The cut surface remaining was grayish in color, and evidently not perfectly sound, although quite firm. As one piece was removed that below rose to its place, and in this way, when bleeding had stopped, instead of a depression remaining, there was a slight bulging. The dura mater was stitched with fine catgut, and this proved to be the most difficult part of the operation. The protruding

brain was held back with a flat spatula while the membrane was being sutured, but the pressure was remarkable and the approximation of the edges of the last portion was not satisfactorily accomplished.

The scalp flap was replaced and strongly sutured, a drainage tube being inserted in the most dependent part. The strictest antiseptic precautions were observed throughout, and at all subsequent dressings.

The growth proved to be a small round-celled sarcoma, very vascular, and showing many evidences of hæmorrhages.

The operation was well borne. Immediately afterwards the temperature was 98° ; pulse 70, of good quality; respiration 10. During the evening the temperature rose to $100\frac{2}{5}^{\circ}$; pulse 90; respirations 15. Next day, February 19, the highest temperature reached was $100\frac{3}{5}^{\circ}$, at 6 o'clock p.m. February 20, the highest temperature reached was $99\frac{1}{2}^{\circ}$, at noon. The dressing was changed, and the scalp flap found bulging greatly, forming a marked prominence. In two situations a small hernia of cerebral matter mixed with clotted blood had formed, the larger through the opening for the drainage tube, the smaller at the opposite angle, where the stitches had partially cut through under the strain to which they were subjected. These protrusions were wiped away, but it was not deemed advisable to close the openings, lest some brain be strangulated between the edges of the bone and scalp. Small quantities of similar matter were wiped away on each of the three days following. The remainder of the wound was healing nicely, and there was no sign of suppuration. Temperature had not risen above $99\frac{1}{2}^{\circ}$. Patient was resting well, was bright mentally, and suffered no pain after the first two days. February 25, a clot of blood, mingled with some cerebral substance of the size of a pigeon's egg, was wiped away. There was no pus. The evening temperature rose to 101° , and the pulse became intermittent. Next morning there was restlessness and stupor, with a temperature of 100° . The dressing was removed and the flap raised, no anæsthetic being required. The dura flap was seen completely reflected back and the exposed brain darkened, from small hæmorrhages into its substance, but there was no sign of gangrene or suppuration. The protrusion was removed with one sweep of a thin, flat knife, the trifling hæmorrhage which occurred controlled with hot water, a pad of iodoform gauze applied over the surface of the brain, and the flap turned down, but not sutured. The dressing was firmly applied. The general symptoms improved, but the prolapse recurred, and two days after was as bad as ever. It was again sliced off, and the scalp firmly stitched with many deeply-placed sutures, no opening for drainage being left.

Altogether three ounces of brain had been removed, and no perfectly normal tissue seen.

All went well for three days, when two stitches in the upper part of the wound were noticed to be cutting through. Others were inserted, but, in spite of all, in a week's time there was a hernia the size of a sparrow's egg. This showed notendency to enlarge, and commenced to granulate. On March 18, it was found bleeding and ruptured, having been injured by the patient in some manner. This was followed by inflammation, which, after several days' treatment with the ice-water coil, subsided. The highest temperature observed at any time, $101\frac{1}{2}^{\circ}$, occurred during this period. An œdematous condition remained, which lasted for several weeks, an abundant serous discharge occurring. This disappeared at length, and granulation recommenced, the wound being completely healed by the middle of July. The patient's general health improved steadily from the first, and there was a complete disappearance of her former lethargy and headaches. She ate and slept well, and took on flesh rapidly.

Immediately after the operation, the loss of power in the left arm and hand was complete. The forearm was flexed, the flexor muscles being in a state of slight tonic contraction, resisting efforts at extension, but there was no opposition to passive movements of the shoulder. The thumb was adducted and flexed.

The lower extremity appeared to possess the power of slight motion in all parts, for, although the patient was unable to move any portion when bidden, slight movements and changes of position were noticed frequently.

The patellar reflex was not examined, but the plantar reflex was normal. The right angle of the mouth was drawn up to a much greater extent than before the operation, the left lower muscles of the face being completely paralyzed, causing great difficulty in the transit of food from the mouth to the throat. Protrusion of the tongue appeared impossible. The upper facial muscles were not affected. The pupils were unequal, the right being dilated, but both responded to light. The urine was still voided involuntarily. Tactile sensation did not appear to be altered. Localization was imperfect, especially in the hand.

On February 28 and March 2, unaided, the patient straightened the left arm, but has never done so since.

March 15. Tongue protruded for the first time.

April 1. Marked improvement in the paralysis of the face. Right angle of mouth less elevated. Less difficulty in taking food. Pupils equal and normal. No increase of power in upper extremity, and absolutely no motion in lower. Leg slightly flexed at all times, and with difficulty straightened.

April 8. Transient clonic spasms of left hand and arm, excited by any attempt at passive extension of forearm. Movement of joints of paralyzed limbs causes pain. Slight hyperæsthesia of left side.

April 11, 5 o'clock a.m., nurse reports a brief, slight, convulsion. As the lights were turned down, its character was not observed.

May 20. Gives evidence of having delusions. Thinks her husband is sleeping in the room adjoining.

May 26. Complained of the room becoming dark. Ophthalmoscope revealed marked optic atrophy.

Present condition. The patient's general health is excellent. She is confined to bed, and eats and sleeps well. Bowels never move without a laxative. Urine is voided involuntarily. She suffers no pain whatever.

At the site of the operation there is a pulsating tumor about the size of a small hen's egg. Temperature, pulse, and respirations are normal.

Mentally, she is bright, cheerful, and happy at all times. Somewhat childish, yet very clever at repartee. Memory is defective. She has delusions, but they are neither fixed nor prominent, and very harmless; e.g., she imagines at times that she has a child, and that her paralyzed arm is the infant, and thinks that she can and does get up and walk.

Smell, taste, and hearing are normal, but sight is defective. Very slight hyperæsthesia exists in the two left extremities, and over the skin of neck and trunk of the same side.

Movements of the joints of the paralyzed limbs cause pain. The two extremities of the left side are completely paralyzed for motion. The forearm is flexed, and a slight tap causes clonic spasms in it. It measures half an inch less than the right. The arm cannot be raised to form more than half a right angle with the trunk without causing pain.

The leg is flexed, forming a acute angle with the thigh, the flexor muscles being hard and unyielding. No extension whatever is possible. It measures half an inch more than its fellow of the opposite side.

Passive motion at the hip is not interfered with. Plantar reflex is exaggerated. Ankle clonus is present. There is a very slight elevation of the right angle of the mouth, but no difficulty is experienced in mastication. Tongue is protruded slightly to the left. Speech is normal. The pupils are regular and equal. Motion and sensation of the right side are normal.

The cause of the hernia in this case was, no doubt, the size and vascular nature of the tumor, and to a certain amount of cerebral œdema, which, according to Von Bergmann, usually follows in a varying degree the removal of large pieces of the skull and dura mater. He says: "The removal of portions of the bony inclosures will cause hyperæmia in the part of the brain exposed, as a result of the removal of regular and accustomed counter-pressure. The blood vessels which are most apt to become dilated upon the removal of their supports are the veins. The irremediate effect, therefore, of removal of a part of the roof of the skull is venous

hyperæmia of the exposed portion of the brain, and it is this venous hyperæmia which afterwards leads to œdema of the brain."

Fortunately such a prolapse as occurred in this case is rare. In a limited personal experience of four cases of operation on the brain or its covering, without replacement of the bone removed, a depression remained in three.

That the patient is living to-day is probably due to the giving away of the flap of dura mater, which was at first regarded as a calamity. This has allowed of more room for expansion, the intact dura being nearly as unyielding to pressure as the skull itself.

What benefit resulted from this operation probably arose chiefly from the openings in the bone and membrane. When these openings had been made, however, retreat was impossible, the brain being prolapsed and lacerated. On the other hand, a more radical operation might have accomplished more, but it is doubtful if surgical interference could be anything but palliative in such a case as this.

PHYSICAL TRAINING AND DEVELOPMENT AS A THERAPEUTIC MEASURE.

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

TORONTO.

THE terms here employed, "physical training, and development," are to be understood as used in the widest sense, as including massage, gymnastics, and athletics.

The essential difference between athletics and gymnastics is one of aim. The aim of athletics (unless of the illegitimate professional sort) is pleasurable activity for the sake of recreation ; that of gymnastics is discipline or training for pleasure, health, and skill. Gymnastics are more highly developed, present more features of educational value, are more comprehensive in their aims, more systematic in their methods, and productive of more solid and considerable results. H. C. Wood defines massage as "a generic name for external manipulations which are employed for the purpose of effecting the nervous and muscular systems and the general circulation."

These terms are also to be understood as limited by well-recognized laws of physiology. The indiscriminate practice of athletics, the careless and unscientific use of gymnastics, and the employment of massage by those who are ignorant of anatomy and physiology, are not to be endorsed.

The difficulties in the way of the proper use of these means of treatment are so great as to discourage nearly all medical men, and to prevent them making any effort to employ them in practice.

The necessity for attention to the physical development of children will be apparent to any one who will notice how many of them, especially in large centres of population, are unsymmetrical, distorted, and imperfectly developed. It is questionable whether the so-called blessings of civilization represent an unmixed good ; the intellectual and social attainments of our times are great, but they have not been effected without cost.

In earlier times, when less humanitarian views prevailed, and the customs of life did not permit a survival of the weakling, a process of natural selection made man more robust ; and the great lungs, stout heart, mighty muscles, sturdy bearing, and unquailing nerves of the forest dweller called

for no special care to bring him to a high condition of physical efficiency. The rush of modern times, the competition in the schools, the prizes to be attained through intellectual and social advancement, however, seem to have made us forgetful of the fact that man is first an animal in order of development, and that physical vigor is the necessary substratum upon which must ever rest great attainments.

The examination and careful measurements of primitive and uncivilized races and of the best models of Greek statuary prove that modern modes of dressing have greatly reduced the girth of the waist, displacing the stomach, liver, kidneys, and other abdominal and pelvic viscera, and interfering with their functional activity. The girth of the waist in woman should be but little less than that of the thorax, and normally it is larger proportionately to height in women than in men. Dr. Seaver, of Yale, reports measurements made of some of the best Greek statues, showing the girth of the waist among women to be only two or three per cent. smaller than the circumference of the thorax.

The following figures taken from Kellog, obtained in the measurement of women among the Chinese, Indian tribes, French, German, and Italian peasants, English and American women and men, show important facts regarding the relation of waist girth to height :

	Average Height.	Average Waist.	Per cent.
American women.....	61.94	24.79	40
Telugu women of India.....	60.49	24.65	40.6
French women (peasants).....	61.01	28	45.4
Chinese women.....	57.85	26.27	45.4
Yuma women.....	66.56	36.84	55.2
Civilized American men.....	67.96	29.46	43.3
Venus de Milo (statue).....			47.6
Mrs. Langtry.....	67	26	38.8

At Wellesley College Dr. Anna M. Wood has measured 1,100 women between the ages of nineteen and twenty-one years, with the following result : Average height, 63 ; average waist, 24.6 ; per cent., 39.

Some measurements which I have made of women by whom I have been consulted because of some deformity of the trunk show the average percentage of waist to height to be below 37 per cent.

It is worthy of note that the measurements just given of American women were of those who ordinarily dressed in the conventional styles. The Telugu women wear their skirts supported by a cord drawn tightly about the waist. The French and German peasants, for the most part, support theirs from the shoulders and discard waist-bands. The Chinese are low of stature, being two inches below five feet, but have waists two inches greater in circumference than the ordinary American woman or women of India. The women of the tribes of Arizona and New Mexico,

unfettered by dress, have a waist measurement 55.2 per cent. of their height.

A large number of school girls between the ages of eleven and thirteen years upon examination gave a waist measure of 23.5 inches. A number of college girls about nineteen or twenty years of age gave an average waist measure of 23.3 inches, thus showing that while general development had been going on the waist girth had been reduced two-tenths of an inch.

My purpose in referring to these measurements is to point out some of the evil results of modern customs and fashions—evils which are very far-reaching, which require varying means for their remedy, but many of which are readily corrected by improved methods of dressing, throwing off the corset, bands, and all such restrictions from the thorax and waist, and following this by a proper attention to physical development. The erectness and symmetry of the trunk must depend largely upon its having an opportunity to develop fully in all its diameters. The injury resulting from restriction, though marked in the atrophy of the muscles, is not limited to these structures, but affects the osseous framework and cripples the contained viscera, whereby injury is done to the progeny, and a condition results which strongly predisposes to deformities of the trunk, without the intervention of any distinctive pathological state.

Modern methods of dressing young women and girls cause the circumference of the waist and lower thorax to be reduced from one to five or six inches below the normal amount. Though it is always claimed by women that no part of the clothing is tight, yet it is seldom that more than a half inch of expansion is permitted in the lower thorax; and it may safely be stated that if the calf of one leg be restricted for a few months or weeks in the same manner as the waist of the ordinary young woman, it would show marked atrophy when compared with the other.

In woman the liver is proportionately larger than in man, and her girth at the waist is proportionately larger. Such constriction, therefore, is responsible for much of the displacement found in the abdominal and pelvic viscera, and for atrophy of the trunk muscles, resulting finally in the distorted spine and other trunk deformities.

In 1887 the Massachusetts Medical Society appointed a commission to inquire into the work of gymnastics in the public schools. In the report made a year subsequently, it was stated that in visiting the schools of New York the children of German parentage could be readily distinguished by their superior bearing and development, which resulted from their training in the German turn-vereine.

Lawson Tait has spoken of the pessary mania. With just as much propriety might we speak of the craze for the use of braces and orthopædic

appliances. In the greater proportion of deformities *per se* a brace should never be applied. We must here distinguish between deformity and disease. Braces, splints, and orthopædic appliances find their chief legitimate use in cases of disease where it becomes necessary to put the affected part at rest and to protect it from injury. Some cases of deformity there are where braces find a proper employment, but in the vast majority of instances either the surgeon's knife should be called into use, or attention should be given to the rectification of the deformity by removing the restrictions of dress, by massage repeated at frequent intervals, and by regular and systematic drill, by which the patient is taught to correct her own errors.

I may best elucidate this part of my subject by briefly relating the following cases :

CASE I. M.P., a young woman, æt. 22 years, 5 ft. 8 in. in height, who for several months previously had been complaining of lameness, pain in the back and legs, had been treated for hip disease and for tubercular disease of the spine, and who, upon examination, showed a strongly marked lateral curvature ; was much depressed and discouraged because of her condition. Was dressed in the conventional style, and had for years been in the habit of wearing tightly drawn corsets and bands. She was first taken before a large mirror, and permitted to see and understand the amount and nature of her deformity. Then she was instructed how to stand and how to move her limbs and trunk so as to render the deformity less apparent. She was assisted in taking the best attitude that it was possible for her to assume. She was then put into a class with others who had deformities also, and given one hour a day in gymnastic work. Her work was so graded as to increase from day to day ; thus for several months went on together the processes of teaching and development. On the one hand careful attention was given so that she might understand the importance of always doing her best. The mirror was brought into constant use so that she might fully appreciate her deformity and the power she had for self-correction. The encouragement afforded her by the manifest rapid improvement increased her confidence, and both in general health and in vigor her progress was most satisfactory. At the present time, after a lapse of two or three years, she presents an excellent figure, and is in good health. The exact time when her deformity first appeared is not shown by her history, but it must have dated back several years previous to my first seeing her. It was noticeable that during the five months that she was directly under my care she found it necessary on several occasions to have her clothing so altered as to correspond with her increased measurements, thus showing that when the restricting clothing was removed, and attention was given to the development of the abdom-

inal and dorsal muscles, that her girths greatly increased, allowing her to present normal measurements.

CASE 2. Boy, *æ*t. 7 years. I found a poorly nourished boy with a moderately marked roto-lateral curvature. A few weeks later, when he came to me for treatment he had chorea. Notwithstanding this the usual work in the gymnasium was begun. Improvement in the chorea was manifest in a few days, and in a week the boy had assumed control of his muscles. He was able to obey accurately the commands of the instructor. In this connection it is worthy of remark that chorea, hysteria, and other nervous disorders, have been reported as occurring less frequently in American schools where regular physical training has been introduced.

During the last seven years I have treated more than one hundred cases under circumstances which permit careful observations to be made. In my own house I have a gymnasium, where, under the direction of a competent woman, systematic and careful exercise is given every day for a period varying from one-half hour to two hours. The cases dealt with have been chiefly those of roto-lateral curvature of the spine, pigeon breast, flat-foot, and unsymmetrical development resulting from infantile paralysis. Incidentally, however, I have had opportunities for making observations in regard to other abnormal conditions, especially hysteria, weak lungs, and general debility.

In dealing with any case of spinal deformity, the good results to be obtained depend not so much upon the particular exercises employed as upon the manner of using them. It is necessary, in the first place, to gain the confidence of the patient and a hearty co-operation. For this purpose I know of no other means so effective as the proper use of the mirror to allow the patient to see her own deformity, and to understand that its correction is not to be attained by the use of props, or by influences from without, but by her own efforts. To this end class work is most important. If a patient be taken alone and given exercise it soon grows monotonous with most girls, and still more so is it useless to simply prescribe exercises to be taken at home. In themselves the exercises may be well selected and quite appropriate to the case ; but the patient will gain nothing by the inefficient work which will be done in nine-tenths of all such cases. Nor is it possible for one who is not thoroughly furnished and ready in gymnastic resources to retain in her class the interest which is so essential to success.

As I am frequently present myself during the exercises, and as I examine personally all cases, and repeat the examination at frequent intervals, making them in the presence of my assistant, the circumstances are peculiarly favorable for the most thorough and careful study of each case, and of the effects upon each individual of particular exercises.

It is a mistake commonly made that the purpose of exercise is chiefly or entirely to develop the muscles. True, muscle is increased in size and is purified by the removal from it of extraneous matter, such as fat and connective tissue, and its aponeurotic attachments are strengthened, but so also is the power of co-ordination augmented, so that movements formerly thought to be complex are effected with ease, thus training the nervous system and saving it a great expenditure of force. As time goes on what was found difficult becomes easy or is performed automatically. The one who has been well trained physically has better developed nerves as well as muscles, a quicker and more accurate co-ordination, a more elaborate organization of his spinal cord and of parts of his brain than has the individual whose muscular system is imperfectly developed.

In the accomplishing of an act muscular power is not more concerned than nerve condition. In fatigue, nerve exhaustion is largely concerned. Conversely, in the training which leads to a correct bearing and form, the nerve centres which govern muscular actions are themselves exercised and strengthened. Thus a physiological basis is afforded for an explanation of the fact that cases of infantile paralysis are improved by physical training. The condition commonly existing in these cases is that not all the ganglionic cells in the spinal centres affected are destroyed, but that some of them maintain connection with their muscles. By physical training these may be developed and their functions greatly increased.

Incidentally, a patient is taught to breathe much more deeply and to exhale much more completely, thus strengthening and training the respiratory apparatus, so that a girl who perhaps had never inhaled a full breath since the days of crying infancy takes into her lungs regularly twice as much pure air as was her wont. By this exercise being repeated I have seen a hollow and unsymmetrical chest assume a well-rounded and symmetrical form, and at the same time improved color and fullness of the cheeks, limbs, and trunk, and an increased tone in the muscle and alertness of bearing that betokened a much higher plane of vitality.

In dealing with defects in the limbs or feet arising from paralysis or other forms of weakness, in such cases as may best be treated by exercise the personal equation is of less moment. Repeated exercise and massage will accomplish its results without so definite a dependence upon the co-operation of the patient.

In postural deformities, however, the personal equation is of great importance, and the best and most complete success is attainable only when the hearty and intelligent co-operation of the patient is secured.

All the methods and advantages of massage are well understood and appreciated by the profession. By such means, however, it is difficult to produce much effect upon the deeply placed structures of the spinal

column. No ordinary methods will succeed in influencing the circulation in the bodies of the vertebræ or in their discs or ligaments. When the patient, however, is suspended by straps passing under the chin and occiput, and the entire weight of the body is thus allowed to stretch the shortened structures of the spine on the side of the concavity, the alternate stretching and relaxation, together with the moulding of the bony thorax by the hands of the operator, increases the circulation in these parts and the nutrition of the spine is improved. In the first efforts it is necessary to proceed with great caution, that injury may not be done, but when this is repeated daily it causes no discomfort, and is a means of giving massage to the most deeply lying parts of the dorsum of the skeleton.

Though my own efforts and observations have been confined chiefly to the correction of deformities and in strengthening weak parts, yet I have seen the results of systematic physical exercise as shown in the digestive apparatus, which was stimulated and strengthened, appetite being improved, absorption made more rapid, circulation through the liver more vigorous and even, the bowels more active and regular, through the general improvement and the greater strength and tonicity of the abdominal muscles.

Its effects have been long recognized in the treatment of those who are mentally imperfect. Both imbeciles and criminals, as a class, have physical proportions that are far below the normal, and the work done by Dr. Seguin, and more recently by Dr. Hamilton D. Wey in the Elmira Reformatory, point to a valuable but much neglected means by which the condition of these unfortunates could be much improved.

For the use of systematic exercise as a therapeutic agent I would claim :

(1) That it has not been sufficiently employed by the medical profession.

(2) That modern modes of living are rendering attention to this subject more imperative.

(3) That while it is the most efficient agent which can be employed in the treatment of deformities, and while it is an aid to all others, yet that it does not take the place of tried and proved methods.

(4) That it demands for its most successful use that we shall have persons who are trained especially for the performance of the work.

(5) That its purpose is not only and chiefly to develop muscles, but to reach the whole being, improving and strengthening the nervous, digestive, and circulatory apparatus.

Selected Articles.

DISASTROUS RESULTS FOLLOWING WHITEHEAD'S OPERATION FOR PILES AND THE SO-CALLED "AMERICAN OPERATION."*

BY EDMUND ANDREWS, A.M., M.D., LL.D.,
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TEN years ago Mr. Whitehead, a surgeon of Manchester, England, conceived the idea of treating hæmorrhoids by a new method. He simply dissected out and cut off the whole lower inch of the mucous membrane of the rectum with all the piles and hæmorrhoidal veins, arteries, nerves, and connective tissue attached to them. Figure 1 will explain the plan :

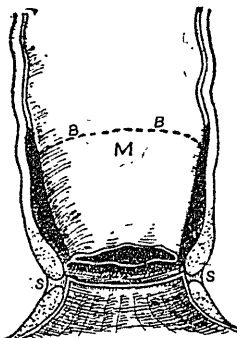


FIG. 1.—SS, The lower circular incision along Hilton's white line ; M, Tube of mucous membrane dissected loose from the sphincter ; BB, Dotted line showing the place for the upper circular incision.

Mr. Whitehead, after clearing out and trying to disinfect the rectum, commences by a circular incision, following "Hilton's white line," that is to say, the junction of the skin and mucous membrane along the verge of the anus. Then he dissects up the mucous membrane with the attached piles, hæmorrhoidal veins, arteries, nerves, and connective tissue, thus stripping bare the tube of the internal sphincter as high as the piles

* Read at the Mitchell District Medical Society.

extend, generally about an inch, so that the dissected part hangs loose in the anus like a cuff of bloody tissue.

The cuff is then cut off above the level of the piles and taken away, and the arteries ligated as fast as divided. The mucous membrane remaining above is then drawn down and stitched to the cut end of the skin, hoping for a union by first intention. This hope, however, frequently fails, in which case the stitches give way, the membrane draws up into the rectum, and a tubular or annular ulcer results, which contracts in healing and causes stricture.

Certain persons, calling themselves "Orificial Surgeons," have slightly changed the order of procedure by pulling down the mucous membrane and making the upper incision first, and the lower one last. For this slight variation they have invented the pompous title of the "American Operation." The final effect is the same in both. As the hæmorrhoidal vessels are all gone, the patient is permanently cured, since there is nothing left of which piles can be made in the future, just as a patient who has had both jaws excised will never have any more trouble with his teeth, or if his foot is amputated he will never have any more corns on his toes. A description of the peculiar mechanism and important functions of the mucous membrane and submucous tissues of the rectum will show that we are not dealing with a simple, smooth mechanical tube, but a highly specialized organ, which cannot be dissected out and destroyed, as is done in a thorough Whitehead's operation, without doing great and irreparable mischief to the patient.

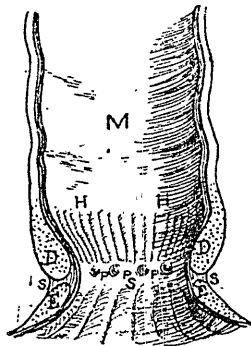


FIG. 2.—*M*, Mucous membrane above the sphincters; *HH*, Columns of Morgagni; *DD*, Internal sphincter; *EE*, External sphincter; *SSS*, Line of junction of the internal and external sphincters, also called Hilton's white line, or the junction between the skin and mucous membrane.

As above stated, the mucous membrane of the lower inch of the rectum has a peculiar mechanism, constituting it a tactile organ, which is the seat of a very acute special sense by which a healthy person is warned of the presence and downward progress of the fæcal mass. Its nerves also

possess remarkable reflex powers over the sphincter muscles, so that they resist the sudden and unexpected escape of fæces and flatus without the necessity of a constant mental attention and exertion of the will.

Figure 2 is a longitudinal section of the rectum. *DD* is the internal sphincter. *EE* is the external sphincter. *HH* is a band or series of little perpendicular projections each about a centimetre long. They are called the columns of Morgagni, and they are the seat of part of the special tactile sense of the rectum. The grooves between the columns terminate below in little pouches called *sacculi Horneri*, from the old anatomist Horner, who first described them. The grooves and pouches contain a reserve of tenacious mucus intended to lubricate the descending mass of fæces. The "official surgeons" have claimed these natural pouches as a new discovery, and call them "lesions," which possess a horrible reflex power, causing almost all the diseases of the body, "from the brain to the muscles." They cure them by the "American operation," or sometimes by merely splitting them down on a blunt hook.

Just below the columns of Morgagni are about eight small papillæ, *PPP*, surrounding the rectum just above the verge of the anus. Each one has an artery and a nerve, and under its base is a little ganglionic enlargement of the nerve. They are important tactile organs connected with the special rectal sense.

The junction of the mucous membrane, *SSS*, is called Hilton's white line, though it is not often distinctly white. It marks the lower line of incision in Whitehead's operation, and is the line or ring of connective tissue separating the external from the internal sphincter.

I have entered into a very extensive correspondence with eminent men both in Europe and America to gather facts as to the results of Whitehead's operation and of the "American operation," which, as before stated, is essentially the same thing. The following table gives a summary of the disasters reported to me :

TABLE.

Loss of the special sense by which the patient should be warned of a coming evacuation and enabled to prepare for it.....	8 cases.
Incontinence of flatus and fæces.....	23 "
Paralysis of the sphincter.....	4 "
Chronic inflammation of the rectum.....	1 "
Failure of union of the wound by first intention, with retraction of the edges of the wound, forming a contracting tubular ulcer with stricture..	9 "
Other ulcers.....	2 "
Irritable or painful anus.....	12 "
Eversion of the mucous membrane.....	4 "
Neuralgia of the pelvis and inferior extremities.....	2 "
General neurasthenia.....	1 "
Fatal peritonitis.....	1 "

Fatal septic complications.....	1 cases.
Non-fatal septic results.....	5 "
Fistula in ano.....	1 "
Cases reported as having bad results without accurate description.....	127 "
<hr/>	
Total.....	201 cases.

The first item in this table is the loss of the special sense warning the patient of a descent of fæces and an approaching evacuation. This is a remarkable condition not described by any author. The reason of the disaster is this : Whitehead's operation, if thoroughly performed, has swept away the whole tactile mechanism of the rectum, and has brought down from above a covering of mucous membrane naturally almost devoid of nerves of sensation, and therefore of nearly all tactile special sense. Hence the patient in many cases gets no warning of a coming evacuation of the bowels until he feels it in his clothing. However, this membrane, like the peritoneum and the small intestines, may acquire a very painful sensibility if it becomes inflamed. Now the patient gets a sort of painful warning enabling him to rush to the closet in time to save his clothing. If the upper incision be made pretty low down, preserving some tactile membrane, the mischief is much less.

Another evil of destroying the tactile and reflex mechanism is that the involuntary reflex action of the sphincters is ruined, and when fæces are found descending the patient can only retain them by a constant effort of attention and of will power, which is very annoying, and cannot be kept up for a great length of time.

One common accident is the failure of the effort at union by first intention. In this case the stitches give way, the mucous membrane which had been pulled down by force draws up again and leaves the anus and lower rectum occupied by a tubular granular ulcer around the whole circumference. This contracts in healing and produces stricture, which has resulted in numerous instances.

Another class of accidents, very common, consists of those which are included under the general name of septicism. Operations which by ligature or by actual or potential cautery close or sear the wounded parts are measurably free from this risk, but those which make extensive incisions have no such safety. The risk from this source in Whitehead's method is not very great, but it is something.

There are a number of thoughtless though reputable authors who talk in a glib way of rendering the rectum perfectly aseptic during an operation by tamponing its upper portion and scrubbing and disinfecting the surface of the mucous membrane below the plug. Something can be done in this way, but only imperfectly. The rectal mucous membrane is not like a surface of polished glass which can be perfectly cleansed by

mechanical and chemical appliances; on the contrary, it is a spongy, honeycombed structure containing several millions of glandular cavities, all opening into the septic channel of the organ and accessible to all sorts of germs. A thousand years of douching and scrubbing would scarcely accomplish complete disinfection of the cells, hence all incisions in it are made through infected territory.

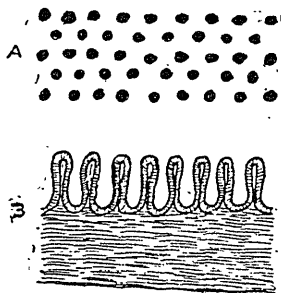


FIG. 3.—Diagram of the rectal mucous glands. *A*, The surface of the mucous membrane showing the position of the orifices of the glands. *B*, Section of the membrane showing the follicles cut through lengthwise.

The impossibility of any such complete disinfection of the tissues' as certain careless writers allege, is obvious. Still, partial purification can be accomplished by much diligence, and efforts for it should be thoroughly made, but let no man deceive himself by trusting to it as perfect and complete. Hence those operations which close up the wounds in the loose submucous connective tissue by ligature, by clamp and cautery, or by searing the wounds immediately with chromic acid or other caustics, are safer than the great wound of Whitehead's operation, which is slowly made, slowly closed by sutures, and cannot be cauterized.

Twenty-three cases in the table had incontinence of flatus, mucus, or fæces. Many of these are due to paralysis of the sphincter from destruction of the nerve supply.

There is reason to think that some operators have got confused by the flow of blood, and have taken out the internal sphincter with the mucous membrane. The gross error can, of course, be avoided by an educated man, but the most of the disasters reported to me might happen to any one. I do not agree with those few distinguished gentlemen who have boldly asserted that all the evil results are due to bad operating.

I have corresponded with a large number of eminent surgeons both in Europe and in this country to ascertain the general opinion as to this operation.

Prof. Mansell Moullin, of London, the author of "Moulin's Surgery," writes me that Whitehead's operation is not often performed in London,

and that there is a prevalent opinion that stricture is liable to follow it. He thinks its usefulness is restricted to a few selected cases.

Mr. Allingham, of London, thinks the Whitehead only adapted to a few cases with varices all around the rectum. For the great majority of patients he thinks ligature is the best of all operations. Smith, of London, always preferred the clamp and cautery to any other plan.

Mr. Reginal Harrison, a well-known surgeon in London, dislikes the operation. He prefers the clamp and cautery.

The surgeons in Berlin rarely perform it, generally preferring the clamp and cautery.

Prof. Esmarch, of Kiel, the inventor of Esmarch's bandage, never uses the Whitehead method. He seizes the pile with forceps, cuts it off, ligates any spurting vessels, and closes the wound with catgut.

Prof. Koenig, of Gottingen, never performs it. He writes me that he always applies the thermo-cautery, and gets his patients back to business in eight or ten days.

The surgeons in Vienna prefer the clamp and cautery in most cases.

I am unable to learn of any surgeon in France preferring the Whitehead. Verneuil and Fontau are much in favor of treating piles by dilatation alone, without any incision, ligature, or cautery, and many other French surgeons follow their example.

Prof. Marcy, of Boston, favors the operation, and has devised improvements on it.

Prof. W. J. Otis, of Boston, opposes it, and has seen bad results from it.

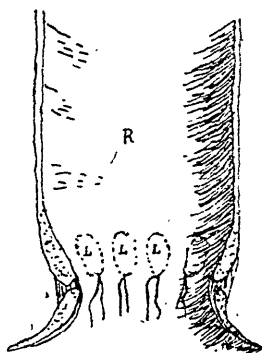


FIG. 4.—Ligation by Prof. Rickett's plan. *R*, Interior of the rectum; *L L L L*, The dotted circles represent the course of the ligatures beneath the mucous membrane enclosing circles of varicose tissue. The ends are left hanging out.

Prof. Wyeth, of New York, thinks the operation a good one if properly performed in selected cases. He has seen three bad cases after the "American operation" done by an "official surgeon" in Chicago.

Prof. McBurney, of New York, likes the Whitehead in cases where the varices occupy the whole circumference of the gut, but in most instances he prefers ligation done after Allingham's method.

Prof. Kelsey, of New York, a standard author on the rectum, says the "misfits" caused by the "American operation" are a constant source of income to him; that the "American" and the Whitehead are alike, and neither of them has any excuse for existence. He thinks "ten per cent. of the patients need a second operation to cure them, not of the piles, but of the operation for piles."

Prof. William White, of Philadelphia, says he has given the operation a fair trial, and now rarely performs it.

Prof. Hunter McGuire, of Richmond, thinks the operation unnecessarily severe, and that all the cases are better cured by ligation or thermo-cautery.

Prof. Merrill Ricketts, of Cincinnati, earnestly condemns both the Whitehead and the "American." He has devised a new operation by submucous ligation after the plan here shown.

Instead of sacrificing the entire mucous membrane he saves the whole of it. With a semicircular needle he inserts a series of silk ligatures

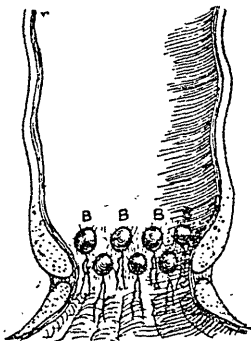


FIG. 5.—Dudley's method of ligation of flat, varicose areas. *B B B*, Buttons or knobs of varicose tissue picked up and tied.

through the lower part of the membrane, and surrounds and ties up the venous plexus in a series of loops, leaving the ends of the ligatures hanging out. It is not necessary to strictly tie all the varices. The parts between the ligatures become obliterated with great certainty. This will probably be found a valuable operation.

Prof. Roswell Park, of Buffalo, favors Whitehead.

Prof. Nancrede, of the University of Michigan, opposes the operation. The results he has seen are very bad.

Prof. Mathews, of Louisville, opposes the operation strenuously. He says the idea that it is at all necessary to dissect out all the varicose veins

is chimerical, and much injury is often done to the sphincter muscle, and that the ligature will cure all these cases much more safely. He adds, "In regard to the so-called American operation it is merely a modification of Whitehead's. The necessity for performing it never exists, except in a homœopathic brain. I have seen a great number of wrecks from this uncalled-for surgical procedure."

Many other surgeons have given me similar opinions. About four-fifths of them oppose the operation.

The peculiar cases supposed to demand Whitehead's operation are those where the whole circumference of the rectum and anus is covered with piles and varicose veins. Some authors seem to know of no way to get rid of them except to dissect out or destroy the whole plexus. This is a melancholy blunder. It is of the utmost importance to know that if you destroy by ligature or cautery about one-half the height of the main pile tumors, or one-third the area of any broad, flat, varicose tracts, the remainder of the tumors or other varices always atrophy and disappear. The destruction of the whole tactile mechanism of the organ is absolutely unnecessary.

Prof. E. C. Dudley, of Chicago, treats broad varicose tracts as follows:

He picks up the mucous membrane and subjacent veins with a tenaculum or with toothed forceps at a number of different points, and ties each bunch as he raises it. The spots tied are arranged in rows, as shown in the figure. The tied bunches slough off, and the enlarged veins in the areas between them become atrophied and disappear.

On the whole, the ligature and the clamp and cautery are the main reliance of most surgeons. It is possible that the submucous ligature of Ricketts, the new plan of Dudley, and the simple forced dilatation of Verneuil, may become favorite methods in the future, but Whitehead's operation and its offspring, the "American operation" of the "official" quacks, have proved far too disastrous to be worthy of the confidence of surgeons.—*Mathews' Medical Quarterly*.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.*

BY WM. H. WELCH, D.D.,

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BALTIMORE, MD.

ACTION OF DIPHTHERIA ANTITOXIN.

THE experimental evidence . . . is in favor of the theory that the antitoxin acts through the agency of the living body, and probably in the sense that it renders the cells tolerant of the toxin. . . . The serum has no curative influence on pseudo-membranous inflammations not caused by the Loeffler bacillus. . . . Without doubt the remedial rôle of diphtheria antitoxin is materially restricted by its inability to combat developed streptococcus sepsis, broncho-pneumonia, and other complications referable to secondary infection, or to stop impending suffocation by immediate removal of mechanical obstacles in the form of false membranes in the air passages ; but the antitoxic serum is the most powerful agent which we possess to prevent the development of these complications and secondary infections. The timely administration of the healing serum, by antagonizing the effects of the Loeffler bacillus, antagonizes in large part the causes of the increased susceptibility to secondary infection, and thus greatly lessens the frequency of their occurrence. . . . In favorable cases the local diphtheritic process is arrested usually within the first twenty-four hours after the injection. Membrane may appear upon spots previously inflamed and invaded by the bacilli, but otherwise there is no extension of the membrane in the majority of the cases which are benefited. The area covered by the membrane becomes sharply demarcated, and the swelling of the adjacent mucous membrane disappears. The membrane may disappear by rapid separation or by gradual softening. Sometimes it persists for several days after disappearance of all other local disturbance. Large membranous casts are coughed up from the larynx, trachea, and bronchi under the serum treatment more frequently than under former methods. The rapid separation of the membrane in the lower air passages may cause sudden increase of stenotic symptoms. Nasal discharge is lessened. The swelling of the glands in the neck and

*Transactions of the Association of American Physicians, vol. x., 1895.

the surrounding œdema disappear as far as these are not referable to secondary infections. The utmost uncertainty prevails as to the influence of antitoxin in preventing the three most important complications as sequelæ of diphtheria: nephritis, heart failure, and paralysis. . . . It is apparent from what has been said that antitoxin is most strikingly beneficial in progressive fibrinous diphtheria, and especially in the prevention and cure of laryngeal diphtheria. In septic diphtheria the serum treatment is of little avail.

Antitoxic serum may produce unpleasant effects, but these do not involve danger to the patient. They are, in all probability, referable to the serum as such and not to the healing, so-called antitoxic substance contained in the serum. The most common undesired effect is some form of exanthem. . . . They may be accompanied by considerable elevation of temperature, and by pain and swelling in the joints. . . . The essential harmlessness of the serum has been demonstrated by over a hundred thousand injections. . . . The principal conclusion which I would draw from this paper is that our study of the results of the treatment of over seven thousand cases of diphtheria by antitoxin demonstrate beyond all reasonable doubt that anti-diphtheritic serum is a specific curative agent for diphtheria surpassing in its efficacy all other known methods of treatment for this disease. It is the duty of the physician to use it. The discovery of the healing serum is entirely the result of laboratory work. It is an outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem.

These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose philozoic sentiments outweigh sentiments of true philanthropy that these discoveries, which have led to the saving of untold thousands of human lives, have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been made without experimentation upon animals.

The article contains tables of statistics very carefully compiled, eliminating as far as possible the sources of error urged against previous statistics on this question. These show beyond dispute "reduction in the deaths from diphtheria by antitoxin treatment of fifty to sixty per cent. in nearly five thousand cases collected from hospitals in Germany, France, Austria, England, and America, and reported by forty different physicians, most of whom are of high reputation and large experience."

Stress is laid particularly on the very favorable opinion of Baginsky, supported as it is in his case by a wide experience and close observation of cases, of which he well says: "Naked figures are so little the expression of

the endless variations of clinical observation, of all those fortunate and unfortunate accidental circumstances which pertain to the constitution and nutrition of the patient and of the complications and difficulties which may bring danger in a mild attack, and lead to a successful issue in an apparently severe attack, that to the clinical observer such figures appear of little value in comparison with the treasure house of his accumulated experience."

Reference is made to a very valuable though involuntary experiment resulting from a failure in the supply of antitoxin during two months. In Baginsky service the mortality for a year previous, under antitoxin treatment, had been 15.6 per cent. During the two months when the supply of antitoxin failed it rose to 48.4 per cent., returning to about the original figure on the supply being renewed. Rork noted a rise of fatality from 33.1 per cent. during the serum period to 53.8 per cent. during the period of failure of supply. Ganghofner, from 12.7 per cent. to 53.2 per cent. ; Herm, from 22 per cent. to 65.6 per cent. ; in Trieste, during an epidemic, from 18.7 per cent. to 50 per cent.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

GRAHAM CHAMBERS, B.A., M.B. Tor.,

Professor of Analytical Chemistry and Toxicology, Ontario College of Pharmacy; Lecturer
in Organic Chemistry and Toxicology, Woman's Medical College;

AND

WILLIAM LEHMANN, M.B. Tor.,

Physician to the Home for Incurables and House of Providence.

A SUBSTITUTE FOR SULPHUR WATERS.

- R. Crystalline hyposulphite of sodium, ʒiiss ;
Distilled water, ʒx ;
Pure glycerin, ʒv .

The hyposulphite of sodium is to be dissolved in hot water, and the glycerin added. A teaspoonful of this solution mixed with a quart of water charged with carbonic acid gas forms instantly an artificial sulphur water.

TREATMENT OF NERVOUS DEPRESSION.

The "pick-me-ups" of the druggist are commonly made up somewhat as follows :

- R. Potass. bromid., gr. xv ;
Spirit. chlorof., mxx ;
Tinct. gentian. co., mxx ;
Tinct. card. co., mxx ;
Spirit. amm. aromat., mxx ;
Elixir simpl., ʒss ;
Aq. menth. pip., q. s. ad ʒi .

This is the kind of draught dispensed over the counter for the "head" produced by deficient exercise, or by overeating or drinking.—*Practitioner*, June, 1895.

SILK VERSUS CATGUT.

Kocher (*Universal Medical Journal*, June, 1895) states that in his operations for goitre primary union was obtained in only thirty-five per

cent. of the cases when sterilized catgut was used. He has now completely abandoned aseptic sutures, and only employs silk made antiseptic by an alcoholic solution of bichloride of mercury. Since adopting this method he has obtained primary union in every case.—*Therapeutic Gazette*.

PREScription FOR HEPATIC TORPOR.

The following is a favorite mixture for "sluggish liver and indigestion":

℞. Acid. nitro-hydrochlor dil., *℥*x ;
 Tinct. podophyllin, *℥*x ;
 Succ. taraxaci, $\bar{\text{ʒ}}$ i ;
 Tinct. nucis vom., *℥*x ;
 Syrup. zingiberis, $\bar{\text{ʒ}}$ ss ;
 Aq. menth. pip., q. s. ad $\bar{\text{ʒ}}$ ss.

Sig.—In water three times a day.

—*Practitioner*, June, 1895.

TREATMENT OF FRACTURED FEMUR BY SUTURE.

Walther (*Rev. de Chir.*, May, 1893) has recently communicated to the Société de Chirurgie of Paris the case of a man who, in falling from a wagon, received a severe injury to the knee. The lower end of the femur was broken into three fragments, and the tibia was displaced backward. The internal condyle remained attached to the tibia, and had been carried backward with the head of this bone. Walther, finding that the reduction and coaptation of the fragments of the femur would be attended with much difficulty, opened the knee by a long incision on the antero-internal aspect of the joint, placed the osseous fragments in contact and in their normal relations, and fixed them together by sutures. The patient made a good recovery. Twelve months after the operation the knee was still slightly swollen and the injured limb a little shorter than the other, but the patella was movable, and the leg could be freely flexed and extended by the patient, who was able to walk without any difficulty, and to follow his occupation of floor-walking. The result, the author holds, is certainly far superior to what would have been obtained by practising the ordinary treatment of fracture.—*British Medical Journal*, June 15, 1895.

COLLECTIVE INVESTIGATION ON ANÆSTHETICS.

Gurlt (*Universal Medical Journal*, June, 1895) states that in Germany the collective investigation upon anæsthetics has now been going on for five years. The use of ether has much increased. The mortality from chloroform seems to be much greater than that from ether, but very often grave disorders of the respiratory organs, such as pneumonia and bronchitis, result from the inhalation of ether, and death from those complica-

tions ought to be regarded as equivalent to death under anæsthetics. Ether was especially harmful after laparotomy.

Schleich holds that anæsthetics are more dangerous the more their boiling points differ from the temperature of the body. He has devised an anæsthetic mixture (chloroform and petroleum ether) whose boiling point is the same as the temperature of the body, and has obtained excellent results, all disagreeable sequelæ being absent.

Rosenberg recommended that the mucous membrane of the nose be brushed with a solution of cocaine before the commencement of the narcosis.

Rehn warns against the use of chloroform near a gaslight, as ethylene chloride is formed.—*Therapeutic Gazette*.

TAKA-DIASTASE.

Doctor Ferdinand Lascar recalls the fact that diastase has an action upon starch identical with ptyalin. Diastase is contained in a greater or less extent in the different extracts of malt, but in them its utility as a starch-converting agent will always remain a limited one. The diastase now made by Takamine is a dry powder, tasteless, of no perceptible odor, and powerful enough to convert one hundred times its weight of starch into a soluble condition. Doctor Lascar finds that it will convert fifty per cent. more than is claimed for it. One of the peculiarities of this product is the rapidity with which the conversion takes place, four minutes being sufficient to fully produce the change that neither iodine nor the microscope can detect unconverted starch. In the making of the tests, as well as in the manufacture of the product, heat should be guarded against, as it easily destroys the action of diastase. The field of usefulness of this product is not alone in infant feeding, but as well in the amylaceous dyspepsias of adults, which are by no means infrequent.—*Therapeutic Gazette*.

SERUM THERAPY.

From the *British Medical Journal* we take the following terse review: Schaefer (*Arch. gen. de Med.*, August, 1895) discusses the present position of the serum treatment, after referring to the researches upon which it has been built up:

(1) *Tuberculosis*. Richet and Hericourt were the first to treat the disease with serum obtained from refractory animals, but up to the present moment no very good results have been obtained.

(2) *Rabies*. Serum treatment does not appear to have a great future, as immunization by intensive vaccination gives greater success. (The latter is the Pasteur treatment.—Ed.)

(3) *Pneumonia*. After referring to the investigation, the author observes that the serum treatment deserves to be considered. The reason that it has not been more generally adopted is probably on account of the difficulty of obtaining the serum from immunized rabbits.

(4) *Enteric fever*. Here the clinical application of laboratory facts has not given any very good results. This may be partly due to the length of time between the penetration of the poison and the treatment, and partly, possibly, owing to mixed infections.

(5) *Typhus*. The injection of serum from patients who had suffered from typhus was adopted, with good results, by Legrain in an epidemic in Algeria.

(6) *Cholera*. The cholera peritonitis of animals is very different from cholera in man. Behring recently announced that he had obtained a curative serum, but the results have not yet been published.

(7) *Syphilis*. The serum from the dog and lamb have been employed, and sometimes with good results.

(8) *Streptococcus infection*. Animals have been vaccinated against this infection. The serum so obtained has been used in puerperal fever with good effect. It has also been employed in erysipelas and angina. (Mar-morecks serum is an assured success.—ED.)

(9) *Cancer*. The results as yet obtained are insufficient to carry conviction. (Treatment with the toxine of erysipelas and *B. prodigiosus* promises earlier success.—ED.)

(10) *Tetanus*. Well-marked tetanus is very difficult to cure in animals, and thus it is not to be wondered at that the results obtained in man are not conclusive. The serum, however, provides a valuable prophylactic agent against tetanus. (See favorable report in this issue.—ED.)

(11) *Diphtheria*. It is in this disease that the serum treatment has registered its greatest triumphs. Where mixed infections exist, the results have naturally not been favorable.

The slight accidents caused by the treatment are to be disregarded, in view of its remarkable efficacy.

The author then refers to the successful application of the serum treatment to snake bites. (Calmettes' serum is in use in India, and good reports have been published through the Pasteur Institute.—ED.) The general results thus far obtained by the serum therapy promise a successful future for this new method of treatment.

SURGERY

IN CHARGE OF

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AND

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A DEODORIZER FOR IODOFORM.

The *Lyon Medical* remarks that the odor of iodoform, if not dangerous, is very noticeable and annoying. The oil of turpentine causes this strong odor to disappear immediately from anything with which this antiseptic has come in contact. The hands may be first washed in water to which some turpentine has been added, and afterward with soap and water, and it will be found that the odor has entirely disappeared.—*New York Medical Journal*.

NOVEL TREATMENT OF FRACTURE.

Cut down on every oblique fracture of the leg, expose the fragments, bring them into accurate apposition, drill holes and fasten by steel screws. There is immediate relief of pain by this method, absence of tension and discomfort due to extravasation of blood into the tissues, and shortening of the period of treatment. This is especially to be recommended in the laboring man, to whom time is money.—*Arbuthnot Lane*.

DISINFECTION OF KNIVES FOR OPERATION.

Boiling in soda solution is required for complete asepsis of operating knives. The latter are not rendered dull by the treatment, but are doubtless often injured by contact of the blades with other instruments and with the vessel. Small, narrow tin boxes containing racks in which the knives may be placed with the edges free should be used. The bottom of the box has several perforations. The boxes are placed in a vessel of water and boiled. Knives should afterwards not be placed in carbolic solution, which dulls. Care is not required to have an exact 1 per cent. solution of soda, because a stronger solution does not injure. A chemically pure soda should be used. If powdered, an even tablespoon; if crystallized, three tablespoons to the pint is sufficient.—*Ible*.

INTESTINAL ANASTOMOSIS.

In a paper read before the New York County Medical Society Dr. Francis Holme Wiggin reported a clinical case, and also the results of twenty experiments on dogs. He objects to the Murphy button (1) because a foreign body is left in the intestine, which is sometimes retained, necessitating a secondary cœliotomy for its removal; (2) the spring of the button may be made so strong as to cut through the coats of the bowel; (3) the weight of the button may anchor the intestine in a flexed position, and so cause obstruction, as in a case narrated; (4) there was some danger of the lumen of the button becoming plugged with hard fæcal matter; and (5) the sharp edges of the lateral openings in the button are very liable to cut through the bowel. Dr. Wiggin prefers Maunsell's method, which he says is suitable for any portion of the canal, and can be safely and easily performed by an experienced surgeon.—*The Medical News.*

STRANGULATED HERNIA OF THE APPENDIX VERMIFORMIS.

Dr. D. W. Graham reports the case of an elderly woman who came under his care with a swelling in the right groin, fluctuating and red, with every evidence of pus, and a strangulated femoral hernia. He opened down into the abscess, evacuated it, and washed it out. He could not find any intestine. The first thing that arrested his attention was a small foreign body, which looked like a piece of chicken bone, with fæcal matter surrounding it, and very suggestive of having come from the appendix. On further investigation he found what, on separating it from the surrounding inflamed tissues, proved to be the end of the appendix in the cavity, and with a perforation in it. It was blackened and swollen. A further search showed an old irreducible omental hernia not larger than the first joint of the thumb.

The chief problem to him was how to treat these contents of the hernial sac in the presence of so much pus and suppurating tissue.

It would be counted good surgery, he thinks, to have left the appendix and the nodule of omentum just as they were found, and treated the abscess cavity as an open wound; but he decided the better plan would be to take a little risk of infecting the abdominal cavity, and treat the sac and its contents as if no suppuration had been present. So, after thoroughly curetting, trimming, and washing all surrounding tissues, he pulled the appendix out and ligated its base in the usual way. The nodule was also amputated, and the sac cut off and closed. The cavity was treated as an open wound, and no effort was made to close the femoral ring.

The patient rallied from a critical condition, and did fairly well for seven or eight days. At this time, fearing intra-abdominal suppuration

from a change of symptoms, he opened the peritoneum through the femoral ring and introduced a small gauze drain, though no pus was found at the time or later. The patient died comatose at the end of two weeks. The autopsy showed the peritoneum free of infection of any kind, and no pus or inflammation about the stump of the appendix or that of the omentum. The kidneys were found to be very small, and the microscope showed an advanced degree of chronic interstitial nephritis.

It is not uncommon to see the appendix as a part of the contents of the sac in non-strangulated hernia, but this is the first time he has ever found it strangulated, or as the only strangulated viscus.—*Chicago Medical Recorder*.

CARCINOMA OF THE CÆCUM.

Dr. Carl Beck presented a specimen of carcinoma of the cæcum to the Chicago Medical Society which was removed from a man sixty years old. For a long time he had no other symptoms except a constant diarrhoea and slight attacks of fever, which led the attending physician to suspect him to be suffering from an attack of typhoid fever. On examination a very small tumor was found in the cæcal region. It was hard, immovable, and apparently the shape of the cæcum. Inasmuch as the vomiting and the dilatation of the ileum indicated an obstruction an operation was advised, which was done, a carcinoma of the ileo-cæcal valve being found just large enough to obstruct the intestines, so that a small lead pencil could not be pushed through it.

The pathological interest lay in the appendix, which was removed at the same time. It was entirely solid and free, but on the ostium internum of the appendix there were papillomatous growths, which indicated that there had been an inflammatory process present. On examination, the appendix proved to be solid—an appendix obliterans. The carcinoma was scirrhus, with very little cellular infiltration. For approximation Murphy buttons were used, side to side anastomosis. The patient, ten days after the operation, at the time of making the report was in good condition.—*Chicago Medical Recorder*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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NASAL AND POST-NASAL CATARRH, ITS PREVENTION AND TREATMENT IN YOUNG CHILDREN.

In the course of an extensive article on this subject in the *Archives of Pediatrics*, October, 1895, J. Bemann, of Washington, urges the necessity of paying attention to the slight nasal catarrhs or colds occurring in young infants. These repeated congestions cause permanent derangement of the nasal septum and mucous membrane. "Colds" should be treated by the application to the nasal passages, with brush, of a two per cent. solution of nitrate of silver. No matter how young the infant is this should be done, in order to insure against permanent damage. The author also strongly recommends the use bichloracetic acid in the treatment of chronic catarrhal affections associated with mucous hypertrophies or with polypoid degeneration of the nasal mucous membrane. The nose is first cocanized, and the pure acid is applied by means of a glass tube drawn out to a fine point. The acid is blown out of the tube on to the hypertrophied area as into the base of the polypus. In case of large polypoid growths they are first removed, and the acid applied to the base. The author discountenances the use of galvano-cautery. Bichloracetic acid, when used to destroy hypertrophies, is followed by normal mucous membrane, whereas, in the case of the galvano-cautery, cicatricial tissue replaces the destroyed area, and a dry catarrh is created. No slough is created by the acid, and, if cocaine be used afterwards, there is no pain. The applications should be repeated at intervals of from one to two weeks. Even in cases of atrophic catarrh or *oræna*, the use of the acid in the author's hands has been followed after sufficiently long treatment by complete cure.

GANGRENE FOLLOWING ACUTE RHEUMATISM.

A case of acute rheumatism with acute endocarditis, and followed by gangrene of the toes, is reported in the *University Medical Magazine* (1895, vol. vii., No. 2) by A. R. Allen.

The patient was a girl of ten years, who presented the typical symptoms of acute rheumatism, involving an ankle, knee, and hip. On the third day acute endocarditis developed. On the morning of the fifth day a blister was found covering the toes, and extending as far back as the juncture of the tarsal and metatarsal bones. Shortly after the rheumatic symptoms, which had been considerably relieved, recurred and continued for several days.

The foot was washed twice daily with a solution of permanganate of potassium. A few days later a slight separation of the gangrenous portion of the foot on the upper aspect occurred, sufficiently large to allow the insertion of a nozzle of a syringe, and the parts were thoroughly irrigated twice daily for several days, when the sloughing had progressed so far that the dead portions could be clipped away. It was then found that healthy tissues extended forward to the base of the toes and to the second joint of the great toe. This being unexpected and gratifying, all ideas of amputation were abandoned. The separation of the gangrenous portion was now rapid. In a few days the bones of the toes were clipped from their tarsal articulation, excepting the two phalanges of the great toe, which were a few days longer in separating.

INTRAUTERINE INFECTION WITH ENTERIC FEVER.

A case is reported (*Berlin. Klin. Woch.*, 1895, p. 539) by Freund and Levy, in which a woman in the fourth week of typhoid miscarried of a five months' infant. The child was alive, but died immediately after section of the umbilical cord. Fœtus and placenta were forthwith placed in sterile vessels, and a bacteriological examination made. Plate cultures made with spleen pulp and with placental blood showed colonies of microorganisms which were clearly *B. typhosus*. The cultures caused no coagulation of milk, led to no fermentation, did not form gas or indol, and grew on potato as an imperceptible layer. Examination of the fœtus discovered nothing beyond a somewhat enlarged whitish spleen; in the placenta the decidua was very thick; no typhoid bacilli were recognized in sections. The case clearly shows that typhoid bacilli may pass from the maternal to the fœtal organism without any modification of the placenta; neither hæmorrhage nor lesions of the villi or of their epithelium were to be found.

HÆMATOMA AND MYOSITIS OF THE STERNO-MASTOID MUSCLE IN NEW-BORN CHILDREN.

This subject is dealt with in an article in *Zeitschr. für Geburtsh. und Gynäk.* by Ludwig Pincus. The author regards the sterno-mastoid tumor as myositis following hæmatoma of the muscle. The differential diagnosis has to be made from myositis syphilitica, from abscess within the sheath of the muscle, and from myositis ossificans commencing in the sterno-mastoid muscle. "Sarcoma" of the muscle in infants, he suggests, is possibly hæmatoma. Syphilis is considered to play no part in the production of hæmatoma, and the effect of manipulation during the birth of the child is well described. As regards prognosis, on an average the tumor disappears in two to three months; suppuration rarely occurs. The injury to the sterno-mastoid muscle is rarely followed by persistent torticollis. The prophylaxis consists in the use of properly constructed forceps, avoidance of torsion, Winckel's method of delivery in breech presentation, and it is of importance that every text-book of midwifery should contain a chapter upon the injuries to the child's body which occur during the act of birth.

FORMOL IN THE TREATMENT OF PURULENT OPHTHALMIA.

Framagel, in *Annales d' Oculisque*, vol. cxiii., No. 2, recommends formol to be used as an irrigation in the strength of 1 in 2,000, and as an instillation in solution of 1 in 200. Irrigation followed by instillation of a few drops of the stronger solution is repeated four times a day.

The author concludes that while silver nitrate remains the leading antiseptic in purulent ophthalmia conjunctival irrigations are necessary, and an adjunct to the silver is needed. Formol fulfils this purpose. By combining the two, satisfactory success is certain.

Formol is not altered by light; it does not rust instruments; it is antiseptic; but its one disadvantage is that strong solutions (1-200) are painful; weak solutions (1-2000) cause no pain. It is sufficient to cure ophthalmia neonatorum when used alone, and it is not dangerous to the corneal epithelium, as silver nitrate may be in experienced hands.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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AND

E. HERBERT ADAMS, M.D., D.D.S.

THE TEETH OF OUR SCHOOL CHILDREN.

J. C. McCoy, M.D., in a paper on this subject, read before the Dental and Oral Surgery Section of the American Medical Association, advocates training the children in the Public Schools in the proper care of the teeth. Each State Dental Association should appoint a suitable committee to arrange a manual on the subject, then induce the Educational Board of the State to adopt such a manual as a text-book to be used by teachers and taught in our Normal Schools, requiring teachers to pass an examination upon the contents of the manual, and teach the subject in the schools. Out of a school of 700 pupils where Dr. McCoy distributed printed slips, "Do you cleanse your teeth with a brush every day?" "Do you cleanse your teeth with a brush twice a day?" 50 cleansed their teeth twice a day, 275 used the brush sometimes, while 175 did not own a brush.

CHICAGO'S GREAT SEWAGE CANAL.

Chicago's great sewage canal grows in odiousness with the progress of the work. There is reason to fear, however, that opposition to the work was too long delayed. The bare suggestion of the project should have been met by the prompt exposure of its wickedness and danger. The people of St. Louis, indeed of the whole state, now appear to be alive to the appalling crime ; but a good deal more is required than an appeal to public sentiment through the American Public Health Association, or otherwise, to have any influence with people capable of undertaking such an enterprise. The State Board of Health of Missouri has adopted a resolution instructing its delegates to the American Public Health Association, soon to meet at Denver, to use every means to secure the aid of the association in a movement to prevent Chicago from dumping her sewage

into the Mississippi, there to become a part of the drinking water of St. Louis and other cities.—*Sanitarian*.

HOW IT WORKED.

Up to 1859 the mortality from typhoid fever in Munich, Bavaria, was 24.20 per 10,000 inhabitants, attributed to the use of well water. In 1860-1865, the wells and cesspits were partially cemented on the sides and bottoms; the mortality dropped to 16.8c. From 1866 to 1873, there was partial sewerage; mortality, 13.30. During 1874 to 1880, sewerage was improved and continued; mortality, 9.26. During 1881 to 1884, the water and sewerage were still further improved; mortality fell to 1.75. Since 1885 typhoid fever has almost been unknown in Munich. Dr. Wilbur, of Massachusetts, commenting upon this subject in the *Atlanta Medical Weekly*, thinks that the time will come when typhoid fever will be wiped from the face of the earth.

THE TEETH AND LONGEVITY.

An editorial in the *Southern Dental Journal* calls attention to the fact that life insurance companies, before placing a "risk," will put the candidate through a most minute examination of every part of his anatomy except the teeth, and may reject an otherwise acceptable candidate for some flaw in his family record some generations back. The army and the navy recognize the importance of the teeth. "The loss or extensive caries of four molar teeth" will cause the rejection of an applicant for enlistment in the navy. Surely it would be well for life insurance companies to take into consideration the teeth of all applicants, as thereby they may avoid risks which will prove very unsatisfactory to them if accepted.—*Dr. G. S. Martin, in Dominion Dental Journal*.

ATLANTA'S WATER SUPPLY.

Atlanta, Georgia, receives her water from the Chattahoochee river, in its muddy and red state, which is pumped into a receiving reservoir about three miles from town; capacity of reservoir, 176,000,000 gallons. The water then flows by gravity through a system of filters into a clear water basin of 1,000,000 gallons. It is then taken from this basin by suction, and delivered into the city by direct pressure, very clear, pure, and sparkling. The system of filters is a combination of the Hyatt and other makes manufactured by the New York Filter Company. Capacity, 7,000,000 gallons daily. A certain per cent. of alum is employed to assist in the purification of the water, but no trace can be found in the water when it reaches the consumer.—*Texas Sanitarian*.

CANADIAN SANITARIA FOR CONSUMPTIVES.

Dr. P. H. Bryce read a report, on November 14, at the meeting of the Provincial Board of Health, on his recent trip through the Territories and British Columbia. The report gives a vast amount of information on the climate and temperature of the west, and concludes with the following observations in regard to a sanitarium for consumptives :

“ It seems, therefore, that in the progress of the movement which this board has for years so persistently advocated for the establishment of hospitals or sanatoria for the proper supervision and treatment of consumptives there can be no good reason to doubt but that if any such institutes be properly conducted their location, whether in Muskoka, Calgary, or Kamloops, will have as happy results from the standpoint of cures as any sanatoria situated in similar climates in other countries, and how great have been their success we have to-day extended statistics to prove.

“ It is to be hoped that in every province such action will be encouraged by both private benevolence and governmental assistance as will lead to the establishment of sanatoria at several centres, so that we may from year to year be able to establish from comparative statistics the real value of the various elements which go to make up the several types of climate.”

Canadians have paid entirely too little attention to the climatic resources of their broad Dominion. There is little doubt but that Canada possesses some health resorts for consumptives which will have a world-wide reputation in the near future.

 DEATH RATE OF AMERICAN CITIES.

From the principal cities of the United States, and Toronto, Canada, the following death rates per 100,000 of population from typhoid fever alone are reported for 1894 : New York, 17 ; Brooklyn, 15 ; Boston, 28 ; Philadelphia, 32 ; Baltimore, 48 ; Washington, D.C., 71 ; Pittsburg, 56 ; Buffalo, 36 ; Cleveland, 27 ; Detroit, 26 ; Chicago, 31 ; Milwaukee, 26 ; St. Louis, 31 ; New Orleans, 28 ; San Francisco, 35 ; Cincinnati, 50 ; Louisville, 72 ; Providence, 47 ; Jersey City, 76 ; Lowell, 55 ; Newark, 15 ; Dayton, Ohio, 20 ; Toronto, 17.

DR. A. C. BERNAYS, professor of surgery in the Marion Sims Medical College, St. Louis, has to defend himself in a suit for publishing a picture and an account of a surgical operation made upon a patient. There was nothing improper in the action of Dr. Bernays, and, if the court should decide against him, the rest of us may expect court notoriety soon.—*Texas Sanitarian*.

Editorials.

SIR WILLIAM HINGSTON.

DR. HINGSTON, of Montreal, has for many years been recognized as one of the leading surgeons of Canada. He is the only Canadian who has ever been requested to deliver the address in surgery before the British Medical Association. He accepted the invitation, which was a very cordial one, and acquitted himself admirably. On the last birthday of Her Majesty the Queen, Dr. Hingston was one of the Canadians chosen who received the honor of knighthood. His medical brethren of Montreal gave a banquet in honor of the event in the Windsor Hotel, Montreal, Tuesday evening, November 5. Dr. Craik, Dean of the Medical Faculty of McGill University, acted as chairman, while Dr. J. P. Rollet, President of Laval University, and Dr. F. W. Campbell, Dean of Bishop's Medical College, were vice-chairmen. After the usual loyal toasts Dr. Craik proposed the toast of the guest of the evening, Sir William Hingston. After a few remarks from Dr. Rollet the toast was received with great enthusiasm. Sir William replied in a brief but happy speech. We are told, however, that the speech of the evening was delivered by our genial friend, the witty Irishman from Kingston, Senator Sullivan.

THE SO-STYLED "AMERICAN OPERATION."

CONSIDERABLE confusion exists in the minds of some members of the profession as to the exact significance of the "American operation," as a recently devised operation on the rectum has been named. The name is a most inappropriate one, and is shedding no increased lustre on the American profession. This operation is a "Whitehead" with a simple difference of technique. In the Whitehead the incision is made at the white line below, and the dissection upward; while in the American operation the incision is made above, and the dissection made downward. The "American operation" is the outcome of a new organization of quack-styled official surgeons, who set about to cure all the ills that flesh is heir to by operations on the different orifices of the body. They do in most

cases an "all-round operation," which includes the American operation. We have seen some of their awful results here, and no doubt similar sad results have been observed in many parts of this continent.

The Whitehead operation requires experience and skill for its proper performance, and even with all this the result is frequently most unsatisfactory. We have reprinted in this issue an excellent illustrated article by Dr. Andrews from the *Mathews Medical Quarterly*, and agree with it completely. The Whitehead should only be done in carefully selected cases. The result is really uncertain; if it is a success, the result is brilliant, but a failure leaves the patient worse than before operation.

DOMINION REGISTRATION.

WE are pleased to note that the discussions which are being carried on, especially in medical journals, in various parts of Canada, on the subject of Dominion or inter-provincial registration, are thoroughly earnest, and yet moderate in tone. There seems to be no doubt that all the provinces want something of the kind; and, if so, surely there are no insuperable obstacles in the way. It happens that the Ontario Medical Council has, by its rules and regulations, caused a certain amount of irritation among certain sections of the profession in other provinces. Without any reference to the merits of the case, we have to state that the council of this province has often been misunderstood by outsiders. We had very good evidence of this at the meetings of the committee appointed by the Canadian Medical Association, and held during the last meeting of that association, when Dr. Pyne, registrar of the council, gave a good deal of information with reference to the attitude of our medical parliament on this question. He showed clearly that our council had, years ago, passed a statute, which still exists, pledging that body to grant reciprocity to any province having a central examining board, with a curriculum equal to that which prevails in Ontario.

This, apparently, caused surprise in some members of the committee, but led to a very important discussion as to the proper length of a medical course. Ontario now requires five years. The majority of the members of the committee appeared to think that a course including four sessions of eight or nine months each would be preferred by most of the provinces. We think that would be a fair compromise, which would not be opposed by the majority of the profession in Ontario. The question as to the standard of matriculation may cause differences of opinion; but there is no reason, so far as we have information, why a solution should not be reached. A *friendly* conference could, probably, accomplish all that is desired in a comparatively short time. Let us have such a meeting between representatives of the different provinces as soon as possible.

THE HOSPITAL CORPS AND THE MILITIA.

AT the recent meeting of the Canadian Medical Association, Deputy Surgeon-General Tobin read a very interesting paper on "Some Proposed Changes in the Militia Medical Service." We are at one with him in the main, but are satisfied that the Department will exercise its usual alacrity in making any change, and that he and the writer of this article will long be mustered out before anything but a *serious consideration* has been arrived at. However, there was organized during the Rebellion of 1885 a Field Hospital Corps, which took charge of the base hospital, at Saskatoon, Battleford, Fort Pitt, Moosejaw, and finally at Winnipeg. This corps of civilians without previous military drill or experience, although hastily summoned together, did excellent service, and while the discipline was not all that we should have liked, yet, from a medical standpoint, it accomplished its noble aim. The different regiments had their stretcher-bearers, and in every case their work was bravely and thoroughly done. Now, if the Militia Department will not establish a medical department, then let it equip the hospital corps of each regiment in a thorough manner. This would be a step in the right direction.

The Militia Department at present does not recognize a hospital corps, and does not pay the men who form it. It is a regimental affair—an appendage without government aid, and has to be kept up by the regiment from its regimental funds, and the private purse of the officers. The government will not equip it. The stretchers, medicine chests, water bottles, etc., are purchased by the funds given by the men and officers of the corps. This is not as it should be. The Militia Department is anxious to see each regiment as fully equipped as possible, but will grant no aid in accomplishing this end. This is poor recompense for time and money spent. The government should equip fully a hospital corps for each regiment, particularly the city regiments, and have these different corps brigaded for instruction and drill. This would give uniformity of instruction, establish an enthusiasm amongst the men, and form the nucleus for a medical corps in each of the large districts.

Then at the annual camps of instruction, a field hospital corps should be established, and a detachment from the different hospital corps in the district told off to man it. This would be under the P.M.O. of the camp, together with such medical officers as might be attached to it, and give the hospital corps men systematic drill and nursing instruction.

This would in no way interfere with the work and duties of the regimental surgeon, who would have the general health of his regiment to

look after, attend to minor ailments, and in cases of sufficient severity order his patient transferred to the field hospital, where nursing would be performed by the men of the hospital corps.

The cost to the government to fully equip a hospital corps, comprising four stretcher sections, would, according to the "Regulation for Medical Service, 1890," be under £100; or, for the three regiments in Toronto, \$1,500. They would then be in a condition to assume any duties in the field, or take charge of a field hospital; but, as a matter of fact, the three regiments in Toronto and the one in Hamilton are now almost fully equipped, all of which has been done at the personal expense of the men and officers of the corps. Let the government show some interest in this department, and thus make it a useful adjunct to the service.

DOCTORS' BILLS.

PHYSICIANS, as a rule, have great difficulty in collecting their bills. The present depression in business matters appears to be affecting the whole civilized world; and, in consequence, we understand that our profession in Great Britain, the United States, and Canada has suffered very materially. It appears to be pretty generally recognized among the laity that the doctor's bill is about the last that ought to be paid. It is only fair to say, however, that the doctors themselves are largely to blame on account of their very unbusiness-like habits and want of regularity and promptitude in sending out their accounts. Our profession, fortunately, is now more highly respected by the public than ever before. This is, probably, especially true in Great Britain, where the social and general status of the physician or surgeon is much higher than it was twenty-five years ago. *The British Medical Journal*, August 31, contains some very kind references to the medical profession, taken from the Hospital Sunday sermon recently preached by the Bishop of Norwich, as follows:

"Nor can I, nor shall I, be silent about the wrongs to which scores of medical men are subject. I refer to the startling contrast there is between the inexorable demands which society makes on medical men, and the elasticity of the social conscience with respect to his remuneration. I have known cases where men are summoned, at all hours and at all seasons of the year. Their bills are presented with timidity, if not anxiety, and they are received sometimes with amazement, sometimes with indignation, and sometimes relegated to oblivion. Nor are cases unknown where the righteous demand for work done is met by calling in another practitioner; he, in turn, to suffer as his brother did before him. I cannot permit myself to imagine that I address any such wrongdoer here to-day. But if I do, then, in my Master's name, I entreat you to

remember that the medical men of this nation are the highest type of their class in the world ; they are entrusted with the secrets of domestic life ; they have all our liabilities, with the special liabilities of their order ; they frequently die as martyrs to science, to suffering, to sympathy, to destitution. . . . Believing this, my plea is that every unpaid medical bill be discharged generously, gratefully, cheerfully, and that whatever account must be deferred in payment the last to be deferred is the account of him who is the human agent who has brought us into the world, enables us to continue our work in life, and many a time lays down his own in endeavoring to baffle death."

CRAIG COLONY FOR EPILEPTICS.

AT the meeting of the Ontario Medical Association held in 1894, Dr. McKinnon, of Guelph, introduced a resolution recommending the establishment of a home for epileptics, which was unanimously carried. The home, however, has not yet come into existence in Ontario. We find in the *Buffalo Medical Journal*, November, 1895, an interesting description of the Craig Colony for epileptics. The object of the colony is to provide for the four great needs of epileptics : (1) To give them schools ; (2) to afford industrial training ; (3) to provide a home ; (4) to furnish scientific medical treatment. It is situated in the Genesee Valley, Livingston county, New York, and contains about 1,900 acres of land. It is arranged on the village plan, and will look like a country town—not like a public institution. The patients, when received, will be set to work or study. There will be tailors, shoemakers, printers, bookbinders, masons, ironworkers, carpenters, painters, etc.

The journal referred to goes on to speak of the opening of the colony as follows :

"Work has been progressing very rapidly during the year to prepare existing buildings for the reception of patients. The first quota of patients, numbering sixty, will be taken from the almshouses early in November. It is proposed to receive two hundred during the winter, and perhaps more. Estimating the capacity of the present buildings at three hundred, additional buildings will be needed during the coming year to accommodate three hundred more patients before the six hundred now in the almshouses can be cared for.

"The patients taken from the almshouses and asylums will be known as state patients, and they will be provided for before any private patients can be received. They will be sent to the colony by the poor authorities of each county according to a form required by law, the blanks for which

will be furnished on application to the State Board of Charities or the superintendent of the colony.

“As soon as all epileptics now upon the public charge eligible for admission to the colony are provided for, private patients will be received at prices to be regulated by the Board of Managers, according to the kind and extent of care and attention required. Such patients may, if it be desired, erect cottages for their own use upon the grounds, upon application to the Board of Managers.”

This is likely to prove a most admirable method of treating this class of unfortunate patients.

DR. JOHN ROLPH.

JOHAN ROLPH, physician, barrister, and politician, was one of the most brilliant men this country has known. After receiving his general education in Cambridge University, England, he studied law in London, and, in due course of time, was called to the Bar of the Inner Temple. While engaged in his law course he also studied medicine under Sir Astley Cooper, and was enrolled a member of the Royal College of Surgeons. He came to Canada in 1821, and settled in Norfolk county, where he practised medicine and law, concurrently. He removed to Dundas in 1824, and in that same year was elected member of the Parliament of Canada for Middlesex. Mr. Clark Gamble, Q.C., in reminiscences furnished to Dr. Canniff, says: “My first introduction to Dr. Rolph was at the Assizes in London, about the year 1827, when he came into court carrying a pair of saddlebags in his arms, one side being filled with surgical instruments, vials, and a package of medicines, and the other with briefs and legal documents and books. He would attend to a case in court, and, when through, would catch up his saddlebags, ascend the court-house steps, mount his horse, tethered near by, and ride off to visit a patient.” He probably did more work in law than in medicine during the next few years; but he entirely abandoned law in 1832, although he then had the reputation of being the most eloquent man at the Upper Canada Bar. In 1831 he left Dundas and settled in York (Toronto). During the next six years he was actively engaged in politics, as well as the practice of medicine. He also received a number of pupils, including Drs. H. H. Wright and J. H. Richardson. Something like forty years after this period, in 1870, Dr. Canniff, at a banquet held in the Queen’s Hotel, “referred to the many excellencies of the veteran teacher of medicine, whose ability to teach he had never seen equalled in the new or old world.” On account of his connection with the rebellion of 1837 he was

compelled to leave the country. We are told, in an article published in the *Mitchell Recorder*, October 25, that he was not in favor of an appeal to arms, but really desired a "mighty, popular demonstration of Canadians, English, and French, for the purpose of impressing the Imperial Government with the necessity of changing their colonial policy."

After he left Canada he practised medicine in Rochester until 1843, when he returned to Toronto and resumed his work as a practitioner and teacher of medicine.

His popularity as a teacher of medicine grew rapidly. "Rolph's School" was practically started in 1843. One of the first teachers he had associated with him was Dr. Joseph Workman. He soon re-entered the political arena, and from 1851 till 1854 was a member of the Hincks government. Dent, in speaking of him with reference to this period, says: "He possessed talents which, under favoring circumstances, would have made him a marked man in either professional or public life in any country. Chief among his qualifications may be mentioned a comprehensive, subtle intellect, high scholastic and professional attainments, a style of eloquence which was at once ornate and logical, a noble and handsome countenance, a voice of silvery sweetness and great power of modulation, and an address at once impressive, dignified, and ingratiating. His keenness of perception and his faculty for detecting the weak point in an argument were almost abnormal, while his power of eloquent and subtle exposition had no rival among the Canadian public men of the times." He resigned his position as Dean of "Rolph's School" in 1870, and died October 19 of the same year at Mitchell at the age of eighty-three. His remains were buried in Trinity Church cemetery in that town, and lay there twenty-five years. The casket containing the remains was taken from the grave, in accordance with the decision of the survivors in his family, and removed to Toronto, October 23, 1895, and interred in the family plot in Mount Pleasant cemetery. It is thought by many that this would be a suitable time to erect a monument worthy of the memory of a man so highly distinguished in both his public and private life.

Meetings of Medical Societies.

THE TORONTO CLINICAL SOCIETY.

THE twenty-fifth regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm street, Oct. 9, 1895.

The President, Dr. J. E. Graham, occupied the chair.

The following fellows were present : Doctors Graham, Brown, Meyers, Walker, Davison, Greig, J. A. Temple, Spencer, Macdonald, Anderson, Macfarlane, Trow, Grasett, A. H. Wright, Bingham, Britton, Baines, Barrick.

PRESIDENT'S ADDRESS.

Dr. J. E. Graham then read his inaugural address. He said that he felt it an especial honor to be chosen as president of a society which had for its object the study of the clinical aspect of disease. The most useful information was that acquired at the bedside. All due credit must be given to the bacteriologist and the pathological histologist for all the light they may throw on the subject of disease as the result of their labors, but we must not underrate the knowledge acquired from observation at the bedside and from a careful examination of the gross appearance of the organs on the post-mortem table.

In a review of the history of medicine during the century that was closing several eras could be noted. The first might be termed the clinical era, that in which Laenec, Bright, and Addison flourished. In our practice to-day we probably owe as much to these observers as to those of more recent date. Laenec's work on stethoscopy was a finished work. The modern stethoscopist had added very little in this department, while some valuable hints of Laenec's had been forgotten. They had few instruments of precision, yet so accurate were their observations, and so careful their reasoning, that the results achieved have stood the criticism of hundreds of observers and stand as facts to-day.

A second era was that of the morbid anatomist, represented by Rokitansky and Virchow. From this period the microscope dated its pre-eminence. In clinical medicine the thermometer was introduced. In 1871, the essayist said, he had the privilege of attending Rokitansky's

lectures. He was not a popular lecturer, and his classes were small. His work, however, was still standard, and had helped to form the groundwork of our morbid anatomy. Reference was then made to the great work of Virchow on cellular pathology. The work of these distinguished men was being carried on by their disciples, Cohnheim and Von Recklinghausen, and others.

The next era was that of bacteriology, commencing between the years 1875 and 1880, when Pasteur made his discoveries in this department. But it was not until 1882, when Koch discovered the tubercular bacillus, that the profession first became interested in this branch of science. Since then it had undergone most rapid development. Following the isolation of micro-organisms, pathological and benign, the attention of scientists had turned to the study of the toxins produced by the bacteria. Many pathological processes originally ascribed directly to the bacteria were now shown to be caused by these toxins.

During the past ten years the attention of investigators had been turned to the study of the symptoms of the patient during life. Now they were aided with many instruments of precision. A more elaborate analysis of the secretions and the excretions of the body during health and disease could now be made. Bouchard was prominent in this line of study. The essayist referred to the work being done in Johns Hopkins in this department. The attention paid to examination of the blood and the urine was commented upon; the careful analyses of these would assist very materially both in the etiology and the treatment. It was to be remembered that diseased organs changed after death. As an example the speaker referred to the disappearance of an eczema after death. The great advancement of the future would be made in the study of pathology other than of morbid anatomy.

The essayist then spoke of the value of phonography in the study of disease. He advanced the opinion that if the phonograph could be applied to the registering of heart sounds, it would be of great service in the study of cardiac diseases. There were many abnormal heart sounds, apart from murmurs, which had not yet been definitely described, but which indicated an abnormal condition of the organ.

Much careful attention was required yet in the investigation of the animal fluids. Much of the present study of them was a mere matter of routine. The analyses of these must be pushed still further.

Dr. Graham then alluded to some recent advances in the line of treatment of disease. Treatment by serum therapy had been successful in diphtheria and tetanus. Animal extracts were now a recognized form of treatment. The thyroid extract had become an established means of treatment of myxœdema. An embryologist had made the remark to him

the other day how difficult it was for the physician to attempt the cure of disease when so little was positively known of the very foundations of life—of cell development and cell growth. His reply was that there were human beings ill all about us who must be attended to in the best manner known to us. Treatment could not be deferred until the physiologist had explained the phenomenon of existence.

ABDOMINAL ANEURISM.

Dr. A. A. Macdonald presented the history of a case of abdominal aneurism.

The patient was a man aged 48, always strong and healthy. He was a railroad man, and his work had been of a heavy nature. About two years ago he noticed, after a heavy lift, a pain in the abdomen. He thought it was a strain caused by the lifting. His physician was unable to tell what was the matter. Some time after this he noticed a lump on a level with, and to the left of, the umbilicus. He had some pain in this lump, but it was not severe. Shortly after this Dr. Macdonald was called to see him. He was then suffering from cough, the result of bronchial irritation; he had diarrhoea and vomiting, and was losing flesh rapidly. The vomiting was a marked feature. At that time the pain was noted a little below the region of the pylorus. So marked was the condition that it was considered, possibly, cancer of the pylorus. The tumor was not movable; it was hard and rounded. The diagnosis was unsatisfactory. Patient was advised to enter the hospital and have an exploratory incision made. The patient was very anxious to know if a cure could be promised; he was answered in the negative. The operation was not urged. The patient decided to wait. The diarrhoea became dysenteric in character, and was not easily checked by the ordinary remedies. Urinary analysis, negative. Ascites followed to such an extent that the lump became out of reach by palpation. About this time Dr. Baines was given charge of the case. Dr. Baines said he saw the case on August 22. The patient was suffering from dyspnoea, anasarca, and marked ascites. Calomel and magnesium sulphate were freely given, causing three or four motions in the twenty-four hours. Nitro-glycerine and digitalis were administered. A week after he entered the hospital, he was tapped, and eighty-four ounces of fluid drawn from the peritoneal cavity. This relieved him a good deal for the time being. There was at this time a very slight trace of albumen in the urine. On September 5 he was put on Guy's pills, one every four hours. On September 15 he was tapped a second time, and 134 ounces drawn off. This relieved him again for a few days. September 25, he was obliged to take to his bed, which he had not done up till this time in the hospital. His neck was markedly swollen. The

throat was examined and œdema of the glottis was detected. In a few hours the man died.

CIRRHOSIS OF LIVER.

Dr. Baines said that he had had the patient admitted to the hospital with the idea that cirrhosis of the liver was present. Although many of the clinical signs were wanting, there was no jaundice, nor any marked tenderness over the liver. He had not known of the lump previously. He had not noticed it when examining the abdomen. The walls were thick with layers of fat, and this, with the œdematous condition, made it impossible to detect any tumor in the cavity. The pulse was small, rapid, and dicrotic. The diagnosis rested between cancer and cirrhosis.

Dr. H. B. Anderson reported on the pathological condition found. There was great general anasarca. There was effusion into the serous cavities—the pleura, the pericardium, and the peritoneum. There was marked hypertrophy of the heart. The lungs were markedly emphysematous. The liver was congested. The kidneys were also congested, and the capsule adherent to a certain extent. The surface of the kidney was rough, and there were some small cysts beneath the capsule. The intestines were normal. The aorta was markedly atheromatous with calcification. An aneurism was found at the site of the superior mesenteric artery. It was about four inches in its long diameter, and three inches across, being oval in shape. Laminated clots filled the superior mesenteric so as to completely occlude it. The remote portion of the artery had dwindled into a fibrous cord. The aneurism had not made pressure posteriorly. It had pressed forward, and was firmly adherent to the head of the pancreas, which organ it had shoved upward, causing pressure to be exerted on the structures in the portal fissure. The mesenteric artery did not seem to be enlarged. A microscopic examination of the kidneys showed an increase in the interstitial connective tissue and a hyaline condition of the glomeruli. The collateral circulation could have been carried on through the pancreatico-duodenalis superior from the hepatic anastomosing with the pancreatico-duodenalis inferior from the superior mesenteric. Besides, by the colica media of the superior mesenteric anastomosing with the colica sinistra branch of the inferior mesenteric.

Dr. McFarlane asked if any bruit was heard when the case was first examined.

Dr. Macdonald replied that there was none in front. He had not listened at the back, as he had not suspected aneurism.

Dr. Grasett said it was not clear to him how collateral circulation was kept up.

Dr. McFarlane said that he failed to see how the collateral circulation was carried on, as the aneurism seemed to be a healed one, and completely occluded the aorta.

Dr. Anderson pointed out that the lumen was not completely closed.

Dr. Graham asked if pulsation in the femorals was noted. He thought the possibility of aneurism in such cases should be kept in mind. He referred to a case where he had made an error in diagnosis in this way.

Dr. Meyers read an interesting account of a recent visit he had made to Lourdes.

METRRORRHAGIA CURED BY OPERATION.

Dr. Bingham reported the history of a case of metrorrhagia cured by ovariectomy. The patient was referred to him by Dr. M., July 15, 1894. The patient was the mother of two children, the youngest of whom was ten. For nine years she had been a sufferer from menorrhagia. She flooded for about fifteen days out of each month, during which time she was bedfast. She lost enormous quantities of blood. She was very bad during the past five years, having to keep in bed most of the time. When she came to the city for treatment by him, she was exceedingly feeble, was much emaciated, and complained of a very great deal of pain in the back and down the thighs, showing that there was pressure on the sacral plexus. Altogether she was in a very bad condition. On examining the uterus nothing was found to account for the severe hemorrhages in the way of local tumors or myomatous masses, except some small bean-like masses in the broad ligament. The uterus itself was very large and flabby and was movable. She was put in St. John's Hospital. He considered it a case for electrical treatment, thinking that if electricity would do any good it should in a case like this, being a case apparently of subinvolution with great prostration and anæmia. Electrical treatment was persisted in for eight months. At the end of that time her condition, as far as the loss of blood was concerned, was not improved. Her general health, however, was improved. Thorough treatment by curettement and tamponage and the other routine treatment having been previously tried without any improvement, the woman, in March, 1895, consented to undergo radical treatment for the cure of the condition. The operation was a simple one. The right ovary had connected with it a cyst; the left was normal. The uterus was as large as one would expect to find it in the third month of pregnancy. It was flabby, soft, and congested. The principal point in connection with the operation was the difficulty of controlling the oozing. It was afterward learned that the woman was a subject of hæmophilia. For years, after the slightest scratch on the hand, the bleeding was very difficult to check. It took three-quarters of an hour to control the bleeding of the stump and from the fundus itself, where there had been some adhesions. A drainage tube was inserted and the wound closed in the usual way. The tube was pumped out every fifteen minutes for several hours. The wound healed by first intention. The patient made an

uneventful recovery. She was now able to attend to her household duties. The speaker said he would like to know why the electricity failed to help the case.

Dr. A. A. Macdonald said that his opinion was that the benefit from the use of the electricity was due to its astringent and escharotic action on the uterine mucous membrane ; but that it would have no effect in curing the ovarian condition.

Dr. Baines said that he had found electricity very beneficial in these cases.

The society then adjourned.

The twenty-sixth regular meeting was held in St. George's Hall Elm Street, November 6th, 1895.

After the opening business Dr. W. H. B. Aikins presented a boy, aged seven, suffering from syphilis. A hard chancre was situated beneath the prepuce, and a macular rash covered the body. Some two or three months before he had been sleeping with a servant girl who had syphilis.

Dr. Fotheringham related a case he had seen occurring in a child three years of age, two hard chancres being found on the side of the nose. Inoculation had come through a syphilitic mother, who had mucous patches, kissing the child. She had noted some abrasions on the face before kissing the child.

Dr. J. E. Graham presented a boy, aged thirteen, who gave a history of paralysis of the throat following diphtheria, subsequently followed by hæmiplegia of the left leg and arm. The left leg was considerably smaller and shorter than the right ; but the feet were about the same size. Slight athetosis could be noted when the patient attempted manipulations with fingers of the left hand. Sensation was normal. Left knee-jerk somewhat weak. The hæmiplegia was probably due to the presence of an embolism or thrombus, whose formation was due to the poisoned condition of the blood. Another possible cause that he had thought of was anterior poliomyelitis.

Dr. D. C. Meyers said he considered from the general appearance of the case that the condition was due to diphtheria poisoning, and that the lesion was somewhere in the right brain. The presence of the reflex would destroy the theory that the affection was of the anterior horns of cord. Sach said there was no wasting in these cases. His experience was different ; in the majority of cases there was wasting.

Dr. G. S. Ryerson related the case of a woman, aged 78, who, up till three years ago, had defective vision, the result of advancing age. Suddenly one night when at church she felt something strange happen to her eyes, and, upon looking at her prayer book, found she could read readily

without glasses. The doctor found, upon testing the eyes, that the sight was very good. He had always been rather sceptical regarding the appearance of "the second sight," but this appeared to be a *bona fide* case. The cause, he stated, was supposed to be due to a swelling in the lens.

Dr. J. A. Temple reported a case of cholecystotomy upon which he had recently operated. The patient, a woman, aged 48, had been in failing health during the past summer, and went to the seaside. Shortly after returning she experienced a severe pain in the region of the liver, accompanied by vomiting and jaundice. Subsequently she had two other attacks. During the last an abdominal tumor was discovered on the right side. From its shape and location it appeared to be one of renal origin. It was not moved by respiration. A tympanitic note could be elicited over the position of the kidney. It was smooth, and felt firm and hard. The liver was noticeably enlarged. Among the several medical men who saw the case besides the speaker, there was a difference of opinion as to whether it was renal or hepatic. His own opinion was that it was connected with the liver. An opening showed it to be the gall-bladder, which, when opened, was found to be thickened and enlarged, and to contain a milky fluid. A gallstone was also found at the junction of the cystic and the hepatic ducts, which was extracted. The patient was recovering.

Dr. J. E. Graham remarked the advance in diagnosis of tumors of this sort since the advance in hepatic surgery. He had seen the case reported, and leaned to the diagnosis of renal tumor. He detailed the various points in the diagnosis.

Dr. F. Strange, who had also seen the case, thought the tumor was connected with the liver, owing to the enlarged condition of that organ, due, he thought, to subacute hepatitis.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the society was held on October 24 in the Council Building, President W. H. Oldright in the chair.

DIPHThERIA IN AN INFANT.

Dr. W. J. Wilson reported a case in practice—diphtheria in an infant one day old, contracted from the nurse. The history had been given him by Dr. Rowan, of Stouffville.

On September 24, the doctor was called to see a woman aged twenty-two, married, in confinement. Found that she had been delivered of a child twenty-five minutes before; the placenta was not yet expelled. A

neighbor woman had washed and dressed the child. After the third stage was over the uterus contracted well. The neighbor washed the mother's genitals with carbolized water. As he was retiring from the case the neighbor reported that two of her children had sore throats; he was asked to see them. There was a large amount of deposit in their throats. The mother had been washing the children's throats out before attending the confinement, and had not washed her hands after doing so. Eight hours after the delivery the infant's umbilical cord was washed with a solution of boracic acid and dusted with a mixture of iodoform and boracic acid powdered and covered with absorbent cotton. The mother was sponged with a carbolic wash three times a day. On the fourth day there was slight œdema around the umbilicus. The next day this was increased, and assumed a coppery red color. The same day the stump separated. On the sixth day the umbilicus was covered with a false membrane. This condition continued until the 10th day, when the child died. On the fifth day the mother's labia appeared œdematous; on the sixth day this was increased and the discharge became malodorous. A diphtheritic deposit appeared on the genitals and inner portions of the labia. The breasts ceased to secrete; the temperature rose, and on the twelfth day vomiting set in. Death ensued. There was a little deposit in the throat. From the ninth day the œdema of the vulva was very great. The labia became tense and crowded together. There was no tenderness over the uterus until the thirteenth day; on the fourteenth the uterus was tender and enlarged. The treatment consisted in the use of carbolic lotions until the sixth day. When the discharge became foul, bichloride and peroxide of hydrogen were used, and a pad saturated with a solution of permanganate of potash placed between the labia. The throat was sprayed with Dobell's solution. The patient was given food and stimulants freely. Nitromuriatic acid and strychnia were administered.

SUPPURATIVE CHOLECYSTITIS.

Dr. H. B. Anderson read a paper on Suppurative Cholecystitis with rupture of the gall bladder, complicating typhoid fever. The patient, J.S., was admitted to the Toronto General Hospital, September 16. He was able to work at his trade in Detroit till July 6, when he was taken suddenly ill with chills and fever, vomiting and diarrhœa, with acute abdominal pains. Chill occurred daily. He was treated for malaria. He recovered and returned to work again August 1, still feeling miserable. He was taken worse in a few days. Chills, fever, vomiting, diarrhœa, and headache, with a good deal of abdominal pain on the right side, were the principal symptoms. He was again treated for malaria, taking quinine till cinchonism was produced, with no result. He was examined before the Mississippi Valley Medical Association. Malaria was diag-

nosed. Of several other men who were working with him and similarly affected, two had died. The patient came to Toronto, September 16. Was placed under the care of Dr. Davison at the hospital. Dr. Davison being absent, the reader had charge of the case. The malarial parasite was first looked for, but none found. This examination was repeated for several days with a negative result. The blood showed six million red cells; hæmoglobin normal; leucocytosis present, there being an increase of the polynuclear leucocytes. Malaria was thus excluded, and some acute inflammatory process pointed to. The temperature was ranging from normal to 102° . The pulse was soft and of a low tension. The tongue was dry, red, and tremulous; lungs and heart normal; mind clear; abdomen on the right side full and prominent and tense; left abdomen soft and lax. Palpation and percussion produced intense pain on the right side all over the region of the liver in front and behind, and some distance below. It was difficult to define the area of hepatic dullness on this account. There was no pain or tenderness in the right iliac fossa. There was no enlargement of the spleen, and no eruption seen on the body. Urine negative. Erlich's reaction was not tried.

Diagnosis. Probably abscess of the liver. There was no history of gallstones or jaundice. There was swelling beneath the ribs below the ninth intercostal cartilage. On the fifth day after admission the intense pain and swelling disappeared, and the patient felt comparatively better. This was soon followed by general abdominal tenderness. The temperature arose to 103° , but fell to normal on the evening of each day. The pulse became rapid and weak. Involuntary evacuations of urine and fæces took place. Patient grew unconscious, and died on the 26th, eleven days after entering,

Autopsy. General peritonitis, acute, with considerable brownish yellow fluid in the cavity, bile-stained, which contained many polynuclear cells containing yellow pigment. Bacteria in the form of curved rods and rounded ends present. The small intestines were bound together by recent inflammatory adhesions. The solitary glands were swollen, and ulceration present in a few of Peyer's patches. The floors of the ulcers were clean and smooth, and appeared three or four weeks old. The liver weighed four pounds, and showed passive congestion. The cystic duct was obstructed by gallstones. The mucous membrane of the gall-bladder showed ulcerated patches. The tissue between the ulcers was reddened and congested. On the right side of the gall-bladder, one and one-half inches from the margin of the liver, one ulcer had perforated through into the general peritoneal cavity. Externally there were adhesions to the liver by a fibrinous deposit. The gall-bladder was greatly dilated. The spleen weighed six ounces. Cultures from the peritonitic fluid showed a rod

bacterium, short, with rounded ends, somewhat constricted in the centre. In places they formed threads. It corresponded to the bacillus typhosus or the bacillus coli communis. An alkaline culture was made; no ingol was found, which proved it was the bacillus typhosus. The doctor referred to the comparative rarity of this complication; to the power of the bacillus typhosus to set up inflammation, and the marked leucocytosis, and to the ease with which malaria was excluded by microscopic examination of the blood.

Dr. Peter's asked if the swelling in the neighborhood of the ribs was apparently due to congestion of the liver, or if it was localized to the neighborhood of the gall-bladder, and how many days before death it was noticed.

Dr. McPhedran asked if the attack in July was not due to gallstone impaction in the cystic duct leading to dilatation of the gall-bladder. He could not see how the bacillus would get up the duct. He thought the infection was more probably hæmatogenous. He asked if the spleen was a typhoid one, and if there were any cultures made from it; if the chills and fever were due to the biliary infection. He was glad attention had been called to the condition of the blood. It was quite remarkable that the red cells and hæmoglobin were normal after so long an illness.

Dr. Peters said that the question of a possible operation had occurred to him; would it be possible in such a case to operate on such a gall-bladder and drain? Of course, the operation would be a very severe one on a patient in so low a condition. If one could diagnose positively the distended condition of the gall-bladder he would probably recommend operation, although there would be great danger attending it. In the case presented there was no mode of escape for the pus from the gall-bladder, and any operation would be incomplete with an attempt to evacuate the duct. He complimented the essayist on the clinical and pathological report of the case.

Dr. Oldright called attention to the great difficulty of knowing what to do in such cases. This had been his experience.

Dr. H. Walker thought an exploratory incision could have done no harm, at any rate; it might have led to a successful issue.

Dr. Anderson said that when the trouble first appeared there was no localized tumor; but about the fourth day the fullness opposite the ninth intercostal cartilage appeared. The tenderness was all over the liver, it was not localized. The swelling in the neighborhood of the gall-bladder was not noticed till later. He thought it was a case for surgical treatment and reported it to the surgical side, but he understood it was considered too late for interference. The spleen was typhoid in character, but no cultures were made from it. There were no marked symptoms of typhoid.

ATROPIA POISONING..

Dr. R. J. Wilson read the report of a case of atropia poisoning. Mrs. C——, aged 24. About noon drank a solution of atropia, containing $1\frac{1}{2}$ grains. Reader saw her with Dr. M—— an hour and a half after taking the solution. She had then been vomiting at intervals for a few minutes, and was drinking hot water. The pupils were widely dilated, pulse 120, respiration 12. Administered $\frac{3}{4}$ grain of morphia hypodermically.

2.15 p.m. Pulse 144, respirations 8, pupils widely dilated, patient delirious. Gave $\frac{3}{4}$ grain of morphia.

3.00 p.m. Pulse 120, respirations 6. No change in the size of the pupils.

4.30 p.m. Pulse 140 and weak, respirations 4, $\frac{1}{4}$ grain of morphia given, and $\frac{1}{4}$ grain of pilocarpine.

5.30 p.m. During the last hour employed artificial respiration with no success. The breathing was stertorous, expiration being prolonged, face livid. The pupils showed slight decrease in size, skin cold, temperature in axilla 97.6° . Injected 5 drachms of brandy and $\frac{1}{4}$ grain pilocarpine.

6.30 p.m. Pulse 120, respirations 5, skin warmer. Administered 2 drachms of brandy, also $\frac{1}{4}$ grain morphia and $\frac{1}{4}$ grain pilocarpine.

7.30 p.m. Pulse 120, stronger, respirations 6, marked decrease in the size of the pupils. Injected $1\frac{1}{2}$ drachms of brandy.

8.00 p.m. Respirations 7, consciousness returned, more color in face.

8.30 p.m. Respirations 8, recognized faces, but could not see small objects distinctly. Had diplopia. Bathed limbs and chest with hot water, and applied hot water bottles to body.

10.00 p.m. Respirations 9, slight perspiration on chest.

11.00 p.m. Pulse 120, respirations 12, perspiring freely. The following day patient could not see to read, but on the second day the vision was quite normal. Recovery was uninterrupted.

Dr. Wilson reported a second case: A little girl, aged 5, had taken a quantity of linimentum belladonna. The child was quite red when he saw it an hour after. The temperature, instead of being subnormal, was abnormally high, being 108° , and after the death of the child it had risen to 110° . Another feature was, the child had tetanic spasms coming on about four hours after she had taken the belladonna.

Dr. Oldright pointed out that the maximum doses in the B. P. were too large. In a prescription he had written he had put down grain $\frac{1}{25}$ of atropia. When he visited the patient next day she had an eruption, the face was flushed and the throat was dry. She did not repeat the dose. He found that the druggist had put in 25m. of solution of atropia, making a 2m. dose, a much larger one than had been ordered, being about $\frac{1}{12}$ of a grain. The dose in the B. P. was 1 to 4m.

The president stated that he had changed in a prescription containing atropia $\frac{1}{10}$ to $\frac{1}{20}$ by writing the 2 heavily over the 1 in the denominator; but the druggist had misconstrued it to mean $\frac{1}{2}$. After taking a dose the patient had a very uncomfortable night. He related two other cases where the patients had taken a quantity of belladonna liniment instead of some other medicine meant for internal use, by mistake. But by the use of morphia and the stomach tube recoveries took place in both cases.

Dr. James McCallum related the case of an old man who was undergoing treatment for his eyes, atropia grain 4 to the ounce being used for eye-drops. He was brought to the hospital in a state of delirium, and it was impossible to tell whether he was suffering from alcoholism, atropine poisoning, or pneumonia. But the following day discovery of the physical sign of pneumonia on one side of the chest revealed what the true condition was.

Dr. Webster reported a case in which an eruption appeared on a young girl who was wearing a belladonna plaster. He had had another case in which $\frac{1}{2}$ grain tablets of belladonna had produced toxic effects. The same dose repeated in pill form had no such effect. He referred to another patient in whom $\frac{1}{10}$ of a minim fluid extract produced a very severe headache and marked dryness of the throat.

The society then adjourned.

Book Reviews.

SAUNDERS' AMERICAN YEAR BOOK OF MEDICINE AND SURGERY, edited by George M. Gould, A.M., M.D., assisted by eminent American physicians and teachers, is in course of preparation, and will be ready for delivery January 1. Mr. Saunders intends to publish this work (in one volume) yearly.

A NEW work under the title of "Consumption: Its Nature, Causes, and Prevention," over 340 pages, with illustrations, is announced, to be soon issued by William Briggs, the Toronto publisher. The author is Edward Playter, M.D., author of Playter's "Physiology and Hygiene" (authorized for teachers), and a number of pamphlets and papers on consumption, and for twenty years editor of the *Canada Health Journal*. He has himself made some special investigations relating to the causes of consumption, and during a practice of over a quarter of a century given special attention to the subject.

The Archives of Pædiatrics will commence its thirteenth year with the January number, under the business management of E. B. Treat, publisher, of New York. *The Archives* has been for twelve years the only journal in the English language devoted exclusively to "diseases of children," and has always maintained a high standard of excellence. The new management propose several important changes in its make-up, increasing the text fifteen per cent., and enlarging its scope in every way. The editorial management will be in the hands of Floyd M. Crandall, M.D., Adjunct Professor of Pædiatrics, New York Polyclinic, and chairman of Section on Pædiatrics, New York Academy of Medicine.

INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M.D., F.R.C.P., Physician and Special Lecturer on Clinical Medicine at Charing Cross Hospital, etc. Seventh American from Eighth English Edition. Revised and enlarged by H. Montague Murray, M.D., F.R.C.P., Physician to Out-Patients and Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital, etc. Illustrated by 224 engravings, Philadelphia: Lea Brothers & Co., 1895. 8vo. Pp. 598. Cloth. \$2.75.

"Green's Pathology" has passed through six American editions, and this, the seventh, comes to us enlarged by new sections added to keep the work abreast of the times. A colored frontispiece, accurately showing the appearance of some of the more common test tube cultures, is an acquisition to the book, while about sixty new engravings have been added to illustrate pathological changes. This work is and always has been a very popular one with

the students—and deservedly so—but the addition of a chapter on the technique of a post-mortem—which might be superfluous in a *system*—would be of great advantage to the student and practitioner alike. It would be a useful guide to him in making an autopsy for an inquest away from the medical centre, when a report would have to be sent to the government. The practitioner finds in this work, concisely put, the change that he should expect to find in certain morbid conditions, and, what is very useful to him, a mention of some of the clinical symptoms by which these changes are preceded. The illustrations, paper, printing, and binding, are up to the high standard of the Lea Brothers & Co.

The following books and pamphlets have been received :

- ANTISEPTIC DRAINAGE IN ABDOMINAL SURGERY. By J. H. Kellogg, Battle Creek.
- A NEW DYNAMOMETER FOR USE IN ANTHROPOMETRY. By J. H. Kellogg, Battle Creek.
- THE NON-SURGICAL TREATMENT OF OVARIAN DISEASES. By J. H. Kellogg, Battle Creek.
- A NEW METHOD OF OPERATING FOR HÆMORRHOIDS. By J. H. Kellogg, Battle Creek.
- THE INFLUENCE OF DRESS IN PRODUCING THE PHYSICAL DECADENCE OF WOMEN. By J. H. Kellogg, M.D., Battle Creek, Mich.
- GRAPHIC METHOD OF RECORDING diseased conditions of the lungs and a new form of pneumograph. By J. H. Kellogg, Battle Creek.
- ANTIPHTHESINE. Report on Professor Klebs' New Tuberculin Derivative and Some of the Cases Treated. By Charles Denison, A.M., M.D., Denver, Col.
- PROCEEDINGS AND ADDRESSES of a Sanitary Convention held at Charlotte, Mich. (supplement to the report of the Michigan State Board of Health for year 1895).
- FAVORABLE RESULTS OF KOCH'S TUBERCULIN TREATMENT IN TUBERCULAR AFFECTION THAT ARE NOT PULMONARY. By Charles Denison, Denver, Col.
- THE CONDITION OF THE CHILDREN'S TEETH OF THE PRESENT DAY ; and the effects of decayed teeth on the health of the children. By J. G. Adams, L.D.S., Toronto.
- THE GRAPHIC STUDY OF ELECTRICAL CURRENTS IN RELATION TO THERAPEUTICS, with special reference to the sinusoidal current. By J. H. Kellogg, M.D., Battle Creek.
- TAYLOR ON VENEREAL DISEASES. The Pathology and Treatment of Venereal Diseases. By Robert W. Taylor, A.M., M.D. Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one very handsome octavo volume of 1002 pages, with 230 engravings

and 7 colored plates. Cloth, \$5.50; leather, \$6.50. Philadelphia: Lea Brothers & Co., Publishers, 1895.

GRAY ON NERVOUS AND MENTAL DISEASES. New (2d) Edition. A Treatise on Nervous and Mental Diseases. By Landon Carter Gray, M.D., Professor of Diseases of the Mind and Nervous System in the New York Polyclinic. In one very handsome octavo volume of 728 pages, with 172 engravings and 3 colored plates. Cloth, \$4.75; leather, \$5.75. Philadelphia: Lea Brothers & Co., Publishers, 1895.

THE DISEASES OF CHILDREN'S TEETH, THEIR PREVENTION AND TREATMENT. A Manual for Medical Practitioners and Students. By R. Denison Pedley, M.R.C.S., L.D.S., Eng.; F.R.C.S., Edin. Dental Surgeon to the Evelina Hospital for Sick Children, Southwark, London. With 470 pages, numerous illustrations. Published in London, Eng. J. P. Segg & Co., Regent Street West, Philadelphia. S. S. White, Dental Mfg. Co.

A MANUAL OF OPERATIVE SURGERY. By Lewis A. Stimson, B.A., M.D., Surgeon to the New York, Bellevue, and Hudson Street Hospitals, Professor of Surgery in the University of the City of New York, etc., and John Rogers, jr., B.A., M.D., Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, New York, etc. Third edition. 334 illustrations, 12mo., 614 pages. Cloth, \$3.75. Lea Brothers & Co., Philadelphia.

A TREATISE ON NERVOUS AND MENTAL DISEASES. For Students and Practitioners of Medicine. By Landon Carter Gray, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Polyclinic, Visiting Physician to St. Mary's Hospital, Neurologist to the Hospital for Ruptured and Crippled; etc., etc. Second edition, revised and enlarged, 72 illustrations and 3 colored plates. 733 pages. Cloth. Philadelphia: Lea Brothers & Co.

Medical Items.

DR. E. T. KELLAM (Tor., '95) has located in Niagara Falls, Ont.

DR. A. N. HOTSON has removed from Innerkip to St. Marys.

DR. E. T. KELLAM, (Tor., '95) has located at Niagara Falls, Ont.

DR. J. W. EARLY (Tor., '90) has removed from Annan to Owen Sound.

DR. JAMES H. COTTON, of Toronto, has returned from a trip to England.

DR. G. B. SMITH has returned to Toronto after paying a visit to Great Britain.

DR. L. F. BARKER (Tor., '90) has returned to the Johns Hopkins Hospital after six months' study in Germany.

DR. W. W. BREMNER, of Toronto, recently left for foreign lands with the intention of engaging in missionary work.

The State of New York has appropriated \$6,000 a year to the Pasteur Institute, managed by Dr. Paul Gibier.

DR. DON ARMOUR and Dr. C. Parfitt, of last year's resident staff, Toronto General Hospital, are now in London, England.

DR. W. T. WILSON (Tor., '92), of Dundas, has been appointed one of the assistants in the Insane Asylum, Brockville.

DR. C. SHUTTLEWORTH (Trin., '94), son of Professor Shuttleworth, has commenced practice in Broadway avenue, Toronto.

THE new wing of St. Michael's Hospital will be formally opened on Wednesday, November 20, by His Grace Archbishop Walsh.

DR. PERFECT, who practised in Toronto Junction for some years, and left it for a time, has returned to that town and resumed his practice.

DR. EGERTON Y. DAVIS continues to give weekly demonstrations on lesions of the hydatid of Morgagni at his private hospital, Caughnawaga, Quebec.

DR. JAMES M. MCCALLUM has lately returned from England and resumed practice at 13 Bloor street west, where he will devote himself to the special practice of the eye, ear, nose, and throat.

DR. THOS. B. FUTCHER (Tor., '93) has been appointed one of the Instructors in Medicine in the Johns Hopkins Hospital, and will take charge of Professor Osler's clinical laboratory at the hospital.

DR. W. J. MCCOLLUM (Tor., '94) has commenced practice at 166 Jarvis street, where his mother has resided since the death of his father, Dr. J. H. McCollum, who also lived for some years in the same house.

DR. T. S. CULLEN (Tor., '90) has been appointed Instructor in Gynæcology in Johns Hopkins Hospital. Dr. Cullen recently passed through Toronto on his way to London, Ontario, where certain members of his family are ill.

DR. INGERSOLL OLMSTED (Tor., '87), for some years Medical Superintendent of the Hamilton City Hospital, has returned to Canada, after spending a year in post-graduate work in the hospitals of London, Berlin, and Heidelberg.

THE will of M. Pasteur, according to Paris papers, reads as follows: "This is my testament. I leave to my wife all that the law allows me to leave her. May my children never depart from the path of duty, and always have for their mother that love which she deserves."

AT Venice, when any one dies, it is the custom to fix a placard on the front of the dead person's house, as well as in the neighboring streets, as a sort of public notice, stating his name, age, place of birth, and the illness of which he died, affirming also that he received the holy sacraments, died a good Christian, and requesting the prayers of the faithful.

A FLORIDA LAW.—"Any person or persons who shall falsely or maliciously disseminate or spread rumors or reports concerning the existence of any infectious or contagious disease shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine in a sum of not less than \$100 nor more than \$1000, or be imprisoned in the county jail for not less than three nor more than six months."

THE eighth annual meeting of the Southern Surgical and Gynæcological Association was held in Washington, November 12, 13, and 14, 1885. There were thirty-seven papers announced, including those from the following surgeons: Dr. Tiffany, Baltimore (president); Dr. Vander Veer, Albany; Dr. McFadden Gaston, Atlanta, Ga.; Dr. Joseph Price, Philadelphia; Dr. Howard Kelly, Baltimore; Dr. Taber Johnson, Washington; Dr. George H. Rohé Catonsville, Md.; Drs. J. D. S. Davis and W. E. B. Davis (secretary), Birmingham, Ala.; Dr. John A. Wyeth, New York; Dr. L. S. McMurtry, Louisville; Ky.; Dr. Henry O. Marcy, Boston, and many other prominent surgeons, especially from the South.

ST. JOSEPH'S HOSPITAL.—St. Joseph's Hospital, Guelph, a new structure built at a cost of \$30,000, exclusive of furnishings, was formally opened October 15, 1895. After an inspection of the building, about 200 sat down to lunch. In looking over the happy speeches delivered after the repast, as reported in the Guelph *Daily Herald*, we learn from Dr. Chamberlain, Inspector of Charitable Institutions, that this fine structure is a monument to the energy and liberality of Bishop Dowling. Hon. J. M. Gibson and Dr. Herod spoke kindly of the noble and unselfish work done by the Sisters of St. Joseph. Dr. Howitt pronounced the new hospital one of the best institutions of the kind on the continent, being well adapted for both medical and surgical work in accordance with modern ideas.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The American Association of Obstetricians and Gynæcologists held one of its most interesting and satisfactory meetings at Chicago, September 24, 25, and

26, 1895. The attendance of members was large. Numerous papers were read relating to obstetrics, gynæcology, and abdominal surgery, and the discussions, as usual in this association, were spirited, forceful, and instructive.

The president, Dr. J. Henry Carstens, of Detroit, administered the affairs of the association with great discretion, facilitating the transaction of the large amount of business before it with thoroughness and despatch.

The following named were elected officers for the ensuing year : President, Dr. Joseph Price, of Philadelphia ; vice-presidents, Drs. Albert Hawes Cordier, of Kansas City, and George Sherman Peck, of Youngstown, Ohio ; secretary, Dr. William Warren Potter, of Buffalo ; treasurer, Dr. Xavier Oswald Werder, of Pittsburg ; executive council, Drs. Charles A. L. Reed, of Cincinnati ; James F. W. Ross, of Toronto ; Albert Vander Veer, of Albany ; Lewis S. McMurtry, of Louisville ; and J. Henry Carstens, of Detroit. Seventeen new Fellows were also elected.

The ninth annual meeting was appointed to be held in Richmond, Va., Tuesday, Wednesday, and Thursday, September, 15, 16, and 17, 1896. Resolutions of thanks were passed as follows : First, to Dr. J. B. Murphy, chairman of the Committee of Arrangements, for the efficient manner in which he had provided for the comfort of the Fellows during the meeting and for the delightful yacht sail tendered the Fellows and guests of the association ; second, to the Chicago Gynæcological Society, for many courtesies tendered ; and, third, to Messrs. Breslin and Southgate, proprietors of the Auditorium hotel, for the free use of a splendid parlor in which the meeting was held, and for courteous attention to the Fellows who were guests in the house.—*Buffalo Medical Journal*.

MEDICAL EXAMINATIONS.

The following candidates have passed the primary examination of the College of Physicians and Surgeons of Ontario, September, 1895 :

- J. F. Argue, Carp, Ont.
- Catharine Bradshaw, Toronto.
- R. B. Boucher, Peterborough.
- C. W. Bouck, Inkerman.
- H. A. Beatty, Toronto.
- A. A. Beatty, Toronto.
- J. T. Clarke, Foxboro.
- A. Davidson, Burns.
- G. R. Deacon, Stratford.
- F. B. Elliott, Mayfair.
- A. Gun, Durham.
- J. A. C. Grant, Gravenhurst.
- J. E. Klotz, Ottawa.
- T. A. McCormack, Harrow.
- J. C. McGuire, Trenton.
- J. F. McConnell, J. A. Sutherland, Toronto.
- W. D. Sharpe, London.
- W. D. Wiley, Dresden.

The following candidates have passed the final examination of the College of Physicians and Surgeons of Ontario, September, 1895 :

- R. B. Boucher, Peterborough.
- C. W. Bouck, Inkerman.
- A. Davidson, Burns.
- A. Downing, Toronto.
- A. Gun, Durham.
- J. A. C. Grant, Gravenhurst.
- L. Hogg, London.
- T. W. Jeffs, Queensboro'.
- C. N. Laurie, Coboconk.
- Eleanor G. Lennox, Toronto.
- L. Lawrason, Dundas.
- H. W. Millar, Orillia.
- D. W. McPherson, Toronto.
- R. T. Noble, Norval.
- H. C. Pearson, Demorestville.
- M. B. Smith, Glanford.
- W. D. Sharpe, London.
- R. W. Shaw, Lotus.
- C. L. Stammers, Toronto.
- D. S. Sager, Brantford.
- E. A. White, Toronto.
- A. S. Wade, St. Lambert, P.Q.
- W. D. Wiley, Dresden.

OBITUARY.

DR. RICHARD ARDAGH CALLAGHAN.—Dr. Callaghan, after passing his final examination in 1872, commenced practice in Thornton, Simcoe county, where he remained for about twenty-one years. In 1893 he moved to Barrie, where he lived up to the time of his sudden death, which took place in his office October 21.

JAMES REA, M.D.—We have to announce with deep regret the death of Dr. James Rea, which occurred at his late residence, corner of Dundas street and Davenport road, Toronto, November 17. He developed tuberculosis in or before 1894, and, as a consequence, spent a part of last winter in California. He derived much benefit from his stay in the warmer climate, and on his return was able to do his ordinary work. On the day of his death he attended to his patients as usual and paid a number of visits. In the evening he was suddenly seized with a hæmorrhage, and died in a few minutes. He received his education in the Toronto School of Medicine, and graduated in Victoria University in 1886. He was attached to Field Hospital Corps No. 2, and served during the Rebellion of 1885. He was most assiduous in his duties, and rendered excellent service. He received the Saskatchewan medal. Soon after this he commenced practice in Toronto, and soon attained success. He was highly respected both by his patients and his brother physicians. He was 34 years of age, and left a widow and two young children.