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CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Introductory Lecture, delivered at the opening of the Forty-first Session of the Medical Faculty of McGill University. By R. P. HOWARD, M.D., L.R.C.S.E., Professor of Theory and Practice of Medicine.

GENTLEMEN,—The revolving wheel of time has rendered it my duty to give this year the opening lecture of the Session to the Medical Students of this University, and while it is somewhat optional with the speaker what the theme of his discourse shall be, custom has almost established it to be the proper thing to address words of direction and counsel to those more especially just entering upon the study of medicine. And while conforming to a custom which has my own approval, I trust the older students will tolerate the common-place observations, which the recital of a tale so often told must contain; remembering that they were once freshmen, experiencing the same anxieties, doubts and aspirations, that probably possess at this moment, many listening to me.

Permit me first, gentlemen, in the name of my colleagues, to give all who are here for the first time, a hearty welcome to this School, and to assure you that we all take a sincere interest in you as young men entrusting us with the responsible work of teaching you the Science and Art of Medicine.

To the many now present whom we have had the pleasure of seeing occupy those seats before, we also offer

a heart-felt welcome, and confess that our sense of our incompetence to perform the task we have undertaken, is not lessened by the confidence in us they manifest in returning to these class-rooms. Such confidence shall stimulate us to do our best.

Before proceeding to make any observations upon the course of study you are about beginning, a few remarks upon the preliminary qualifications required of the medical student may not be out of place.

As far back as 1847, the qualifications required from a person about to commence the Study of Medicine in Lower Canada, were, "a good moral character, and a competent knowledge of Latin, History, Geography, Mathematics and Natural Philosophy," to which were added in 1850 "a general knowledge of the French and English languages."

In 1866, the Medical Council of Ontario, which had been incorporated in 1865, adopted the Matriculation examination recommended by the General Medical Council of Great Britain, which although not so comprehensive as that demanded by the laws of this Province, yet was more explicit, and the examination having been committed to one competent person, not directly connected with any Medical School, was a very important improvement upon our Lower Canada practice, and was at once adopted, and has been ever since carried out by this University. And let it be remarked *en passant*, that to the Canadian Medical Schools belongs the honour of having adopted a standard of preliminary education recommended by the Medical Council of Great Britain, which has not as yet been generally accepted and enforced by the teaching and examining bodies of the mother country.

About to enter then upon the study of Medicine, I assume that you have all passed the matriculation examination, which marks the beginning of the four years you are legally required to spend in its pursuit. The training of the mental faculties involved in obtaining a liberal education, forms the best preparation possible for one

intending to acquire a knowledge of the many and various branches of learning that compose the Medical curriculum. But while it may be admitted, that the study of the dead languages is as competent to impart mental training as the study of Mathematics and Natural Science, it may be fairly urged that much of the time that is usually spent upon Latin and Greek, might well be given, at least by youths intended for the Medical profession, to a more thorough study of Euclid, Algebra, Physics and Chemistry.

While the accuracy and felicity of expression secured by a classical training, is of extreme importance to members of the pulpit and the bar, the habits of severe reasoning and careful observation produced by the study of Mathematics and Natural Science are of primary importance to the members of our profession, the subjects of whose investigations demand above all others the exercise of the reasoning and observing faculties. Now while more or less attention is given to the various departments of Mathematics in the educational establishments of this country, the subjects of Natural Philosophy and Chemistry are seldom sufficiently insisted upon as important branches of general education; yet I am convinced that in the case of youths preparing for the study of Medicine, those subjects should form an important part of their preliminary training. So numerous and comprehensive are the purely medical subjects which the student of medicine must learn, that it is improvident and unwise to defer the study of Physics and Chemistry till the student, having passed his examination in the preliminary subjects of general education, begins his professional training.

In corroboration of these views, I am pleased to be able to adduce the following observations of Dr. Huxley, than whom upon such a subject perhaps few are more competent to speak authoritatively:—"The great step towards a thorough medical education is to insist upon the teaching of the elements of the physical sciences in all schools, so that medical students shall not go up to the Medical

Colleges utterly ignorant of that with which they have to deal ; to insist on the elements of Chemistry, the elements of Botany, and the elements of Physics being taught in our ordinary and common schools, so that there shall be some preparation for the discipline of Medical Colleges."

Passing now to the subjects of the Medical Curriculum, which are to form the subject matter of your work for the next four years, these are divided into *primary and final*. The former include Anatomy, Physiology, Chemistry, Materia-medica and Botany, and are correctly called *primary*, not only that in the order of things an acquaintance with them must precede an intelligent study of the final subjects, but for the higher reason that a broad and deep acquaintance with these primary subjects forms the surest foundation upon which to erect the superstructure of the medical art.

Anatomy, which deals with the structure or organisation of the body and which is admitted to be the *basis* of medical education, should occupy a large portion of your time during the first two years of your pupilage. While to many students it forms a subject of much interest and great curiosity, to many more it appears a mere mass of dry details and unconnected facts. Now, in my opinion, this unfavourable view of anatomy arises mainly from persons attempting to learn the subject from lectures and books, instead of in the dissecting room from the human body itself, where alone it can be learned. You are fortunate in possessing the means of thus acquiring a knowledge of the structure of the human body, for although 300 years B.C. anatomy was taught, probably for the first time by Herophilus, from dissection of the human body, yet six centuries later Galen chiefly used apes. and it was not until after Mondino in the fourteenth century of the christian era had published his treatise upon anatomy from actual dissections of the human cadaver, that at every University, *one or two* human bodies were opened every year. Indeed for many centuries the church interdicted

the use of human subjects in the study of anatomy. Yet so essential is anatomical science to medicine that we find Galen speaking of a work on anatomy as "the most beautiful hymn which man can chant in honor of his Creator."

Closely allied to the knowledge of form, size, structure and relative position of the component parts of the body conveyed by the pursuit of anatomy, is that knowledge of functions and use of those parts taught by Physiology.

So closely related to anatomy is physiology that they should always be studied together; the student will find the dry details of descriptive anatomy impressed upon the memory and made interesting by a consideration of the offices, and uses of the several parts of the organism; and on the other hand, a close investigation into the anatomical form and structure of the organs will materially assist in making known their function.

Physiology has claims also upon your attention not merely as the helpmate and complement of anatomy, but as an essential qualification of the physician. It is scarcely needful to state that you must be acquainted with the functions of the various organs, with the laws which regulate their working and with their vital manifestations in health, if you would comprehend, detect and rectify the morbid conditions of the body in disease.

It may be quite true that as yet physiology has not given us scientific information upon the *modi-operandi* of the remedies we employ, and that in therapeutics clinical experience rather than physiological theory must be our guide. But pathology, diagnosis, and hygiene are very largely indebted to physiology for its valuable assistance, and even when it fails to make positive additions to the science or art of medicine it will often protect against erroneous views and practices. This indirect influence of physiological knowledge is not, I think, sufficiently appreciated, and I am convinced that every advance made in physiology will benefit some department of medicine. I have not time to dwell upon that department of physiology called *histology*, or gen-

eral anatomy which combines the microscopic anatomy with the physiology of the *tissues* of the body, and will venture only the remark that however valuable as a preparation for the study of *morbid* anatomy, there is a danger that the great development which histology has attained of late years may lead to an undue attention being given by the student to that subject, and to a consequent slighting if not neglect of the much more important topic, physiology proper.

Another of the fundamental subjects that must receive your earnest attention during your primary years is *Chemistry*. While some knowledge of Chemistry is assumed to be the possession of every man of liberal education in the present day, and is necessary to a comprehension of what is going on in the natural world in which we live, and in the practical working world in which we act; it is indispensable to the student of medicine. Chemical agency plays an important part in many of the processes of the living body, notably in those involved in respiration and digestion, in the production of animal heat, and even of the secretions and excretions; and the application of chemistry to physiology (*Zoo-chemistry*) is a modern addition to the subjects claiming your attention, and from which some valuable contributions to practical medicine have been derived. Chemical knowledge too will largely avail in the study of *Materia Medica* and of *Toxicology*, indeed it is indispensable to a knowledge of the methods of preparing and prescribing medicines, and of detecting poisons, and administering their antidotes. Chemistry is one also of those subjects which educate and develop the observing faculties, the correct employment of which distinguishes the able physician. It is now taught in this school both theoretically and practically, and I would advise you to take the *practical* course during the summer succeeding your first course of systematic lectures upon the same subject, instead of during your final session, as has hitherto been the custom.

The other primary branch to be glanced at is *Materia Medica*, the object of which is to make you acquainted with the remedies you are to employ in the art of Medicine. In this country two six months courses are devoted to its study, no doubt because it is intended to teach chiefly the therapeutic uses of drugs, rather than their methods of preparation and compounding, which more properly appertain to pharmacy. The importance of therapeutics to the student will further appear in the circumstance that their consideration forms also a large proportion of the duties of the lecturers upon Surgery and Medicine. Thanks to a better knowledge of the natural course of many diseases, and to greater accuracy in their recognition, we know more about the capabilities of our remedies than was known only a few years ago. The *modi operandi* of medicines are not well understood, and probably cannot be until physiology and pathology have attained to the rank of sciences; but very much is known about the real properties of medicines and respecting their uniform action upon healthy structure and function; (physiological action) and with these you should become familiar, as they constitute the only standard with which to compare the action of remedies upon morbid structure and function (therapeutical action.) Allow me also to commend to your special attention a department of therapeutics that is now at length receiving the imprimatur of authority and experience by the employment of the faradaic and the galvanic current in the treatment of disease. A very dangerous agent in the hands of unlearned persons, electricity when employed by a physician instructed in its application, becomes a very useful and a safe remedy.

The four subjects just considered, constitute the very foundation of medical science and art; and as a further reason why you should thoroughly master them in your pupilage, let me add that once you have become practitioners you will not again have an opportunity of studying anatomy and chemistry practically, and will not have the time

nor most likely the inclination to study any of the four subjects at all. These subjects form also the topics of the primary examination which you may pass at the end of your second or third session.

The *final* examination deals with the three great practical branches, in the exercise of which you are to spend your lives, viz : Midwifery, Surgery and Medicine, and with a minor, and, compared with these, to the medical student a much less important subject—Forensic medicine.

In this country, where most medical men are general practitioners, it is scarcely necessary to advise that an equal attention be paid to Medicine, Surgery and Midwifery, and I will rather offer some remarks upon the methods of acquiring a knowledge of those subjects. These are by attending systematic lectures and reading books upon them, and by studying them clinically.

The professors of the several branches will bring before you a systematic but condensed account of the more important subjects appertaining to Medicine, Surgery and Midwifery ; and while attending the lectures upon those subjects you will do well to take careful notes, which, while compelling your attention during the delivery of the lectures, will serve you in your preparation for the weekly and the final examinations. Indeed, I have been told by many a young practitioner that he has often found his notes of lectures of great assistance to him in the diagnosis and treatment of difficult or obscure cases. These notes may be supplemented by the careful study of some good handbook, which your teachers will gladly tell you of.

But it is in the hospitals that these great subjects can be most profitably studied.

The credit of having first established hospitals is due to the monks—and *one* of the first, if not *the* first, of these houses was built by Fabiola, a Roman lady, in the 5th century. Intended at first as mere receptacles for the sick; after a time they became the schools at which students of medicine acquired a practical knowledge of their art.

The teaching given in hospitals is called clinical or bedside teaching, and is as necessary to the education of a physician as the laboratory is to the instruction of a chemist, or the workshop to the carpenter's apprentice. Indeed, some authorities would substitute clinical teaching for systematic lectures, but both have their respective uses and advantages.

In the hospital the clinical teacher takes his pupils to the bedside of a patient, and examines him in their presence. In a methodical manner he obtains from the patient a history of his former health and ailments, and in many cases inquires into the family history also, to learn the tendencies to disease, longevity, etc., inherited by the invalid. He then ascertains the present state of the patient, by investigating the symptoms and signs furnished by the several organs and functions of the body, and in many instances by examining the secretions also; he then announces the diagnosis, and explains his reasons for arriving at it—and lastly prescribes a treatment.

While thus *demonstrating* the method of investigating disease, the teacher calls upon the students in turn to employ, and thus educate their own senses of seeing, feeling and hearing. While dwelling upon the cardinal symptoms, he points out those which are of trivial significance, or of unusual occurrence, or of pathognomonic import, and finally employs the case as a typical illustration of the disease he recognizes it as, or, as more frequently happens, adduces it to show that the precise descriptions of disease contained in systematic treatises, are seldom realized at the bed side. After the student has been more or less prepared in this way, he is called upon to exercise his own powers of observation and analysis by reporting cases entrusted to him, an exercise in medicine or surgery analogous to dissecting, for the purpose of learning anatomy. Be sure that you avail yourselves of every opportunity of so doing.

From what has just been said, you will perceive that while in the lecture room you obtain complete descriptions—more or less faithful pictures—of disease; in the hospital, you have an opportunity of seeing, and as it were handling disease. Just as your knowledge of the mechanism and working of a steam engine would be more complete and lasting, if having read, or listened to an accurate description of the machine, you should afterwards examine one both at rest and while in operation, so will the studying of disease in the hospital supplement the knowledge acquired from systematic lectures, and render it more full and lasting.

Then there are certain subjects of the highest value, that can be learned only at the bed side of the sick, and some of them with difficulty even there, without the assistance of a teacher—such as bleeding, cupping, bandaging, dressing wounds, the application of splints, and other surgical appliances; the exploration of the heart and lungs by auscultation, percussion, etc., of the eye through the medium of the ophthalmoscope, of the larynx by means of the larynxscope, and so on. See to it that while *students* you become familiar with these mechanical aids, for when *graduates* practising your profession, you will not have teachers to instruct you in their use, nor wards in which to attempt to learn by yourselves how to employ them. And, moreover, it will be especially at the outset of your career, before you can have by long experience obtained an almost instinctive knowledge of disease, that you will need the assistance of these modern instruments in the detection and diagnosis of disease.

It is while attending the hospital, also, that you may not only learn the method of making pathological examinations of the dead body, but acquire an acquaintance with *morbid* anatomy, and learn to recognise the alterations of structure effected by disease. The clinical teacher will, on the death of a patient, take his class into the “post-mortem room” and carefully open and inspect the organ said during life to

have been the seat of disease, and the other organs as well ; and will then demonstrate the correctness of his diagnosis and the grounds of it, or point out the incorrectness of it and from his failure teach a lesson that may be of life-long value to you as well as to him. The subject of *Morbid Anatomy* will also be systematically taught by the Professors of Surgery and Medicine in connexion with the affections of the several organs, and let me now, once for all, bespeak for it your earnest attention. The detection and the diagnosis of disease at the bedside depends largely upon an accurate knowledge of the alterations of structure induced by disease ; indeed such knowledge forms an essential part of the history of very many affections. Its study teaches the pathologist that what may seem to be a disease of a single organ, is frequently a more general affection implicating many organs—that some widely distributed lesions, such as malignant growths, abscesses, spots of softening, of gangrene, etc., may have had a local origin in some part of the body far removed from the sites of the secondary lesions—that, as a general rule, idiopathic disease, *i. e.*, disease occurring in the absence of predisposition or local violence, is very rare in healthy bodies—that the tissues themselves and not the constitution only of the patient largely determine the form of the disease and the course it shall run ; for example, cancer when it originates in the brain testis or liver, is usually medullary ; in the mamma it is oftener scirrhus ; in the tongue, lip or gullet usually epithelial—in healthy persons inflammation of the serous membranes generally produces lymph, of mucous membranes, pus ; of the liver or lungs very rarely pus—and, time permitting, very many more important uses of a knowledge of pathological anatomy could be shown.

The only other inducement to a close attendance in the hospital that I will mention is, that you may there learn practically the therapeutic uses and value of drugs, and the influence they exercise upon morbid action. While watch-

ing daily the effects of various drugs taken by forty to fifty patients, the subjects of various morbid states, you will gradually grow familiar with their properties, with their appropriate doses and uses, and with the modifying influence exerted upon their operation by age, habits, idiosyncrasy, and disease according to its nature, severity and stage—you will at the same time come to form a correct estimate of the powers of remedies in controlling morbid action, and be thus qualified to employ them not only with more skill and success, but with more confidence or at least with more knowledge and humility.

Such then are the several more important branches with which you must be familiarized before obtaining a degree in Medicine, and let me recommend you to learn them all thoroughly, so necessary are they to the man who would practise in all the departments of our art, who would be a general practitioner, which is the position of nearly all medical men in this country.

After you have begun practise will be the suitable time in which to cultivate any special aptitude you may have, whether it be for diseases of the eye, or ear, lungs or kidney, or for surgery, medicine or midwifery. Even specialists should be thoroughly and broadly instructed in the general principles of pathology and therapeutics.

Perhaps no other profession presents so many distinct departments of science for the acquisition of its followers as ours, and for this reason let your entire four years be continuously devoted to learn them. The summers, except for the first few weeks after the close of the winter session, which should be used as holidays, ought to be employed in systematic work. Several hours of every day during the summer should be spent at the bed side in close observation of the sick, and practical Chemistry, practical Midwifery and the lectures upon Hygiene and Sanitary Medicine should be attended at the same season of the year; and you will derive great benefit from the expenditure of a couple of hours a day, for three months in learning

practical pharmacy in the hospital under the direction of Mr. Cameron, the Apothecary of the institution. It may be the only opportunity open to some of you to become familiar with the preparing and compounding of medicines.

You should also avail of the comparative leisure of the summer months to supply any deficiencies of your preliminary education, and I would venture to advise you especially to work at Natural Philosophy, French and German.

Gentlemen you are entering upon the study of medicine, at a favourable period in its history. I am not alluding to the repeal of the laws of Theodoric which were in operation till the eleventh century, according to which a physician forfeited his *fee* if his patient died, and the surgeon was delivered over to the friends to be dealt with at their pleasure if his patient being a gentleman should succumb after an operation—nor to the removal by the Pope in 1452 of the edict which had condemned physicians to a life of single blessedness—nor even to the salutary direct and indirect influence upon medical science exercised by the general diffusion of knowledge in the present day as compared with the withering influence exerted by the general ignorance of Europe from the seventh to the twelfth century, when it was rare to find a layman who could read or write. I allude rather to the temper which now pervades medicine in common with other sciences, and to the great additions to pathology and therapeutics which have been made of late years. No doubt it is as true to day, as ever it was, that

———“ Every worm beneath the moon
Draws different threads, and late and soon
Spins, toiling out his *own* cocoon.”

But at no period have men been more severe in dissecting, unspinning, even destroying, not alone the theories spun by others, but their “own cocoons” also. The “quod semper, quod ubique” sentiment of Theologians has no place amongst modern physicians. Mere authority and opinion, however fossilized by age, have comparatively

little weight. Accurate observation, careful experiment and exhaustive comparison are held to be the only reliable basis of safe induction in scientific medicine.

I incline to believe that one of the characteristics of the age is a steady and continued progress in all departments of medicine rather than sudden and fitful conquests of scientific discovery—and such method of advancement is more hopeful and desirable than the more brilliant but fitful flashings of great truths from the mind of genius. It would require several lectures to describe the numerous important additions made to medical science and art since I sat where you now do, and I will only allude to a few of them.

Perhaps the most important of them, because of its universal application, is the employment of the thermometer at the bedside as an instrument affording the most reliable information as to the existence, nature, course, and probable issue of disease, and frequently serving as a reliable guide in its treatment. This is the greatest advance made in clinical science since the days of Laennec, and should place Traube's name along with his and Hunter's.

The gain to pathology arising out of the discovery and elucidation of embolism and thrombosis by Virchow and our own Kirkes, cannot be estimated. The process of embolism has explained the sudden occurrence of many cases of paralysis, blindness, embarrassment of the lungs, heart, and other viscera; of gangrene of the members, and of multiple abscesses. It has elucidated the nature of softening of the brain, the mode of propagation of cancerous and other growths to remote parts; and it has been suggested but not proved to be the cause of the delirium of fever, the ataxic movements and failing power of chorea, the cause of hypostatic pneumonia, and of some cases of uræmia.

The recent doctrines of Virchow, which made the cell elements of the tissues the seat of and the main agents in morbid action, although carried too far by its author, has

done good service, by replacing the older humoral pathology, which referred all morbid action to alterations which had begun in the fluids of the body, and by preparing pathologists for the present doctrines, which recognize the essential operation and co-operation of the tissue elements, and the blood and other fluids in diseased processes.

Within the period alluded to, many important diseases that had escaped recognition or been misinterpreted, have been carefully described, as for example:—Addison's & Hodgkin's disease, Leucocythemia, Trichinosis, Visceral Syphilis, Cruveilhier's disease, Locomotor Ataxia, Pseudo-hypertrophic Paralysis, and several others. Two instruments have been furnished the practitioner which have revealed to his actual sight many affections of the eye and wind pipe, whose existence had not been previously known, and others which although known, could not be positively made out.

The inoculation experiments initiated by Villemin in 1865, and repeated in various ways by Andrew Clark, Burdon Sanderson, Wilson Fox, Waldenburg and others, have opened up a question than which not one in pathology is of greater importance. While I am not convinced that these experiments prove that tuberculous disease results from the mere absorption of the products of inflammation or even of caseous pus, and that it differs from Pyæmia mainly in the greater activity of the local alterations, as shown in the suppurating and sloughing tendencies, and in the more severe constitutional disturbances observed in the latter, I admit that it is not easy to overthrow the reasoning based upon those experiments, and that they are splendid illustrations of the active truth-seeking spirit of the age.

Indirectly arising out of these inoculation experiments, we appear to be on the verge of some valuable discovery in pathology. Quite recently Dr. Burdon Sanderson while inoculating animals with inflammatory products, serum

pus, etc., and even with pure chemical irritants, found that the exudation formed by the secondary inflammation thus induced, as well as the blood of the animals contained extremely minute organic bodies—rod-like in shape—called *bacteria*, the office of which is, he believes to carry the infection contagium—or septic matter from one diseased part to another. Now if this be true, and if as he thinks the *bacteria* are essential to the conveyance of infecting material in Pyæmia, there arises the hope that we may yet discover some agent which taken into the system may destroy these contagion carriers, much after the manner in which we kill the vegetable fungi growing upon the skin in favus and pityriasis.

In connection with this new subject of scientific interest the older students present, as well as my colleagues, will be pleased to hear that Dr. Osler, who graduated here in 1872, has just made a discovery of great interest, and that promises well for the future, of our young countryman.

He has discovered in his own blood, while in health, large and small masses composed of minute corpuscles agglutinated together. These had been met with by others, but Dr. Osler has discovered what had not hitherto been known, the actual development of bacteria from these masses when a drop of blood is mixed with a weak solution ($\frac{3}{4}$ per cent.) of common salt and maintained at the temperature of the body.

I wish that some friend of this University would endow a Chair of Physiological and Pathological Histology, and that our young friend might be invited to accept the appointment and devote himself solely to the cultivation of his favorite subject, and at the same time bring honor to himself and to Canada.

Time will not permit me to adduce illustrations of the advances made of late in Surgery, Obstetrics, Therapeutics, and indeed in most of the departments of medicine. But before concluding with a few words of counsel, there is one

topic germane to the present subject upon which a few remarks may not be out of place.

Looming up in the future appear to me to be two things that will render the practice of medicine more successful and therefore more agreeable. I refer to the special education of women as nurses, and to the establishment of the department of state medicine with its special qualifications. My time will only permit of a few observations upon the former subject.

You are aware that for some time past the question of the education of women for the profession of medicine has been much discussed. Holding that the practice of medicine is not the appropriate sphere of woman, I yet believe there is a very closely allied department of honorable, useful and scientific labour, in connection with the management of the sick and the prevention of disease, for which women, not men, are especially suited by natural endowment—viz: as educated and trained nurses. The improved training now given nurses at the useful establishments lately instituted in Germany and England, does not supply the qualifications that appear to be necessary, but a more comprehensive education and training that would elevate nursing to the rank of a scientific art like our own, and would secure to its members the social position and material rewards that belong, and are generally given to those who combine a scientific education with a useful calling. Such an art would in my view imply a liberal preliminary education at least equal to that now required of the medical student, assigning however a first place to natural science, and a lower one to the classics. And 2nd a professional education extending over three full years and embracing the following scheme of subjects:—Anatomy, Physiology, Chemistry, Materia Medica, Pharmacy, Dietetics, Hygiene and Clinical instruction in nursing the sick and wounded, in dressing wounds and applying splints, etc. Such nurses to receive a diploma upon examination, entitling them to practice the art of nursing and to charge

fees in rates proportionate to our own. Such a body of trained nurses would supply the greatest want we have as physicians, and would open up a career of usefulness and honourable employment to our sisters, who would then be not alone the helpmates, but the *complementa* of the medical profession.

Gentlemen,—Many of you, no doubt, feel dismayed at the contemplation of the work laid out for you. But take courage. Set yourselves quietly, honestly and hopefully to the work, and you will gradually become familiar with the many new terms that may at first perplex you. You will soon perceive order and system where now confusion and chaos obtain, and will have before the end of the first session, gained confidence in your ability to overcome the difficulties in your path, as others have done. As a rule, the first session determines the future standing of the student. Strive, therefore, during it, to form habits of punctuality, industry and steadiness. Do not lose the advantage of a good start, or you will regret it every succeeding year.

In addition to taking careful notes of the lectures, procure, under the advice of your teachers, the best text-book possible upon each subject, and master it. It is an old saying with a good foundation, "Beware of the man of one book." Your motto should be "Multum, non multa." From the very first week of your attendance prepare thoroughly for the weekly "grinds," as the students elect to call them. This will establish industrious habits, strengthen the memory, produce readiness and confidence in answering, and impress the subjects studied more permanently upon the mind. Avoid attending too many lectures at the same time; rather distribute the various subjects equally over the four years; and take care to employ the summer months as systematically and industriously as you do the winter.

Seek early to acquire manual dexterity in the dissecting-room, laboratory and wards; and educate your senses and

observing faculties by a diligent and regular attendance at the bedside in the hospital. (But I have already spoken upon the last named subject.)

Take care of your health. Many a promising man breaks down by over-application to study and the neglect of hygienic laws. Make it a rule to study only so many hours in the twenty-four, and to take out-of-door exercise from one to two hours every day. Mental work done when mind and body are fagged is indifferently done, and costs more than it is worth. It is not easy to lay down any rule on this head; but every person may soon find out for himself how much time he can devote to study short of mental fatigue.

Cultivate those moral and religious principles, habits and feelings, which will lead you to prefer virtue and self denial to popularity and self gratification, and conduct yourselves with sobriety, modesty and correctness, becoming men aspiring to the possession of an influence and knowledge which in the opinion of an eminent heathen elevate their possessor to an equality with the gods.

Beware while devoting so much time and thought to the study of the physical sciences that you do not insensibly glide into the fashionable spirit of unbelief of the day, in which natural laws are regarded as self originated—the existence of a Creator questioned or ignored—the intelligent superintendence of a Divine mind in the universe, and over the affairs of men doubted or denied—and nature's laws made to replace nature's God. Because in your investigations of the laws of matter and force, you are permitted to hold nothing as truth that can not be demonstrated, or that appears to be opposed to known physical laws, do not therefore conclude that the great mysteries of Revelation are unworthy of credence, and that there can be no relationship for man beyond his present existence.

Wonder! but—for we cannot comprehend,
Dare not to doubt. Man, know thyself! and know
That, being what thou art, it must be so.

We creatures are, and it were to transcend
 The limits of our being, and ascend
 Above the Infinite, if we could show
 All that He is, and how things from Him flow.
 Things and their laws by man are grasped and kenn'd,
 But creatures must no more ; and nature's *must*
 Is reason's choice ; for could we all reveal
 Of God and acts creative, doubt were just.—
 Were these conceivable, they were not real,
Here, ignorance man's sphere of being suits
 'Tis knowledge self, or of her richest fruits.

Then rest here brother ! and within the veil
 Boldly thine anchor cast."

HOSPITAL REPORTS.

Sept. 8th.—A most interesting case of general paralysis presented itself at the out room to-day. The subject was a boy of three years, apparently well nourished ; parents both healthy and free from all hereditary disease of a nervous character. The mother positively states that when bearing this (the third) child in the seventh month she received a blow from a heavy axe handle in the back of the head, which stunned her and laid her up for some days. When the child was born at the full term, and after a natural labor, a curious conformation of the head was noticed, the occipital portion being regularly indented in the position of the protuberance as ordinarily observed. Otherwise the child was pronounced healthy in every particular. As it grew and the bones of the head became more consolidated, the indentation remained, but he teethed late, and did not gain that power in his limbs to enable him to walk, that is expected in a child when it reaches the eighteenth month or thereabouts. At present the limbs appear comparatively strong, but there is an evident

want of co-ordination in the movements, so that when he is put down to walk, his feet move in almost precisely the same fashion as a person suffering from locomotor ataxy, there being power without harmony of action in the muscles. When you offer him any object which interests him, the hand will move all round it or will fall short of catching it, and his want of success in securing it evidently annoys him exceedingly. Occasionally the movements are somewhat choreic in character. There is paralysis of the sphincters, and he is yet unable to articulate.

This case, if the history can be credited, is certainly unique as regards the connection between the external injury to the mother and the effect on the child in utero. From the symptoms as well as the position of the malformation, one would naturally suspect either entire or partial absence of the cerebellum, or some condition present in it that modifies its functions.

Sept. 16th.—Another street car accident was admitted this morning. It appears the man, aged about 45, by the way a French Canadian, and also from Quebec, visiting the Exhibition, was riding on the front platform of a thronged car, when he was either pushed off or slipped and fell, the car striking him as it passed, and probably the wheel passed over his left arm. He was found to have sustained the following injuries: A triangular piece of the scalp, of the size of the palm of a large hand, covering the posterior and lateral region of the head, was completely raised from the skull and hung loosely by its attachment. There was considerable bleeding from branches of the occipital artery. On the inner side of the upper left arm, about the middle third, a piece of integument two inches square, with cellular tissue attached, had been entirely removed, leaving the muscles bare to that extent. But the most extensive and dangerous injury remained to be examined. On the flexor side of the arm, about the upper third, was a jagged wound about four inches in length and one inch at its widest part, and

through which protruded the upper fragment of the broken radius. The ulna was also fractured. A large portion of one of the flexor muscles occupied the greater part of the opening, which rendered the reduction of the fracture most difficult. As to *treatment*: The wound in scalp was brought into position by four interrupted wire sutures; the wounds in the arm were injected with a 1 × 20 solution of carbolic acid, and the edges brought together as much as practicable; dressings of weak carbolic lotion, with a splint to the front of the arm, completed the treatment.

There are in all some ten cases of typhoid fever in the wards at present. The majority of them are running an ordinary mild course, but peculiarities have presented themselves in at least three that are worthy of mention.

1st.—Under Dr. McCallum.—Here the fever was on the decrease on the 17th day, when he began to complain of pain in his right arm and a little swelling was noticed about the elbow. In twelve hours, however, the entire member from the upper arm to the tips of the fingers was enormously swollen. The condition was by this time recognized as *phlegmasia dolens*; the vein could be readily felt as a firm cord in the axillary and brachial regions. The day following the other arm became similarly affected. He suffered also great pain in the right leg for some hours, and the vein had a cord-like feel, but no swelling occurred. The arms were kept swathed in cotton wool covered with oil silk and a bandage, and by the end of the fourth day the œdema had almost entirely disappeared. The case was now progressing rapidly towards a favorable termination, and it was thought he might rise in a day or two, when suddenly another complication made its appearance in the shape of a periosteal node on the right femur about the middle and on the inner side of the shaft. This was treated by the local application of the simple tincture of iodine, and internally small doses of the potash iodide. Before the inflammation subsided the node had reached the size of a goose's egg. It took four weeks to dissipate it.

2nd Case.—Under Dr. McCallum.—This was a very severe case in a lad of 17 years. He had, during the second week, almost uncontrollable diarrhoea, and his life was despaired of for three or four days. However, under astringents and abundance of alcoholic stimulants, he pulled through. But the interesting point was a peculiar *aphasic* condition which became marked as the fever diminished. At times he would misname familiar things, and again use the affirmative in place of the negative, as well as indicate by his behaviour many of the other less marked symptoms of that hitherto unexplained condition known as aphasia. At other times, again, he would exhibit an obstinate taciturnity, which it was feared might be the index of some organic change insidiously going on in the brain. This condition, however, gradually disappeared as convalescence advanced, until at the time of his discharge, about a month after it was first noticed, there was nothing of it remaining.

There is a third case at present under Dr. McCallum's care, which serves to illustrate the immense benefit to be derived from the judicious employment of alcoholic stimulants in typhoid fever. The patient is an English emigrant who, at the time she was attacked, was still suffering from the effects of the sea-voyage, and, consequently, little fitted to withstand an attack of typhoid fever. On the evening of the day of admission, which was the fifth of the fever, the temperature was $104\frac{3}{4}$, and the pulse 124; there was diarrhoea; tongue already dry; great gastric disturbance as evidenced by constant nausea and occasional vomiting; delirium at night from the first; sleep at all times restless, and of that moaning kind so often seen in febrile conditions. She was ordered the ordinary fever mixture of the hospital, (whose chief ingredients are hydrochloric acid and chlorate of potash), with abundance of milk and a pint of beef tea in the twenty-four hours. For the diarrhoea, the compound powder of chalk with opium was given in doses of twenty grains every fourth hour. On

the second day after admission the more serious symptoms being unabated, and the pulse, and tongue of that character indicating stimulants, four ounces of port wine were ordered to be given during the twenty-four hours. About the eleventh day of the fever the temperature ranged from 103° in the morning to $105\frac{1}{2}^{\circ}$ at night; pulse 140 to 146; weak and compressible; pupils dilated; few if any lucid moments; at times breathing of a stertorous character. Dr. McCallum now despaired of saving his patient, but as a *dernier resort* ordered stimulants almost without limit. Eight ounces of brandy were substituted for the wine, and even this was to be added to if necessary, before his visit on the following day. In twenty hours a pint of brandy had been consumed, either made up with water hot and cold, or given at times in milk or beef tea as the ingenuity of the nurse might suggest, and the effect even now was marvellous. The chart shows on the evening of the 13th day of the fever, a temperature of $103\frac{1}{4}$, and on the morning following it had fallen to $100\frac{3}{4}$, pulse 116; mental condition much clearer; diarrhoea entirely abated; condition most promising. It is unnecessary to follow the case further than simply to state that this process of stimulation was continued uninterruptedly for five days, after which the brandy was gradually diminished in quantity; that the symptoms once so alarming were regularly beaten back by the stronger ethylic foe; and that the patient, with the exception of a trifling relapse is making a good recovery.

This case is not, however, unique in the practice of this hospital. It is merely mentioned here because it happens to occur at this time. Scores of instances might every year be cited to illustrate as forcibly as the above, the sometimes marvellous effects of well-timed stimulation in this and other fevers, and the various forms of blood contamination; but the utility of such a procedure is questionable. There are those in the profession, and fortunately for suffering humanity these are in the majority, both in

number and influence, who require no proof beyond their own experience, of the good effects of alcoholic stimulation in disease. But there are a few, and far too many at that, who are either without experience, never having had the more formidable cases to treat, or who, experienced, are the victims of a whim, which, sad to relate, is too often the fittest term to apply to their prejudice. With such, even argument, ever so strong, is as so many empty words. To say that they would sacrifice life to maintain their false position, knowing that position to be false, is not in all cases true, but that lives are lost for the want of stimulation, is known to be as true as gospel.

Case of Fracture of the Femur, from a fall from a window. Rupture of the Diaphragm. A knuckle of Liver strangulated. Death. Autopsy. Under the care of Dr. Drake. Reported by Mr. J. C. CAMERON, House Apothecary, Montreal General Hospital.

S. H., aged 26, admitted to Montreal General Hospital early on the morning of March 18th, 1873. A fine, stout, hearty-looking young man, by occupation a commercial traveller, was boarding at the St. James Hotel, his room facing Bonaventure Street, situated in the story just above the entrance to the Billiard Room. Being aroused by the alarm of fire, and partially suffocated by the smoke, he seemed to lose all self-possession and presence of mind, and is described by an eye witness as acting more like a madman than a rational being. After vainly endeavoring to escape through the passages, he became desperate, smashed out the window, and attempted to reach the ground by dropping from sill to sill, catching them with his hands. During this insane endeavor, his hold slipped, and he fell heavily, his thigh striking the large iron bar which supported the sign of the billiard room. This completely broke his fall, and he rolled off upon the icy pavement below.

When brought to the Hospital, he appeared to be suffering intense agony ; great restlessness ; general surface cold, and covered with a profuse, clammy perspiration ; pulse small and weak ; pupils dilated ; low muttering delirium, from which, however, he could be roused with difficulty ; great dyspnœa ; could not remain recumbent, but required to be kept propped up ; called loudly for air, wanted the windows thrown open constantly ; vomited a large quantity of blood, and seemed to be suffering severely from shock. Had all the appearance of a man who has lost a large quantity of blood, and it was supposed that, in all probability, some severe internal injury existed, accompanied by considerable hemorrhage. Upon examination it was found that his thigh was broken about the junction of the upper and middle thirds. This was at once put up, and extension applied in the usual manner. Some bruises also existed about the head, but nothing serious. Pulv. opii gr. i was administered every third hour. Beef tea and brandy were liberally given. Notwithstanding all efforts, however, he gradually sank. The delirium became less noisy, he grew more quiet and sleepy, and at last died at 11 a.m.

Autopsy—20 hours after death.

Rigor mortis well marked.

On opening the chest, no signs of hemorrhage were seen. All the organs were much congested. Upon closer examination, the diaphragm was found to be ruptured, and a portion of the liver firmly grasped by the edges of the fissure, was seen protruding into the pleural cavity. The part thus constricted was a portion of the convex surface of the right lobe, about the size of a goose's egg, as broad at the apex as at the base, gorged with blood, bleeding freely when cut into, although no previous hemorrhage had occurred. The rent in the diaphragm was lateral, about one inch and a half long, situated more anteriorly than posteriorly. The circulation in the liver was greatly impeded, and of course the general circulation as well.

There was no rupture of either lung, nor hemorrhage into pleural or peritoneal cavities.

The patient never rallied from the shock; and from that he died. The rupture must have been due to indirect violence when he fell upon the iron bar; the force with which he struck must have been very great, for he was a very heavy man, and the thick bar was considerably bent by the blow.

The great dispnoea was no doubt due to the perforation of the pleural cavity, and also to the motion of the diaphragm being much impeded and restricted by the knuckle of liver so tightly grasped in the rent.

Case of Hysterical Contraction of both knee joints. Recovery under the care Dr. MacCallum. Reported by Mr. R. MACDONNELL.

Mary Costen, aged 13, was admitted to the Montreal General Hospital on the 27th June, 1873.

Is an orphan, brought up in a convent at Laprairie. Up to last December, she had enjoyed good health, but was constantly confined within doors, and took but little exercise. Her menses had first appeared at the age of twelve, but had always been very irregular. In December last she had variola in a slight degree, and during this attack was seized with profuse menstrual discharge. When convalescing from this illness, both legs gradually became flexed on the thighs and finally this contraction grew so strong that she found herself quite unable to stand erect.

On admission, the legs could not be straightened at all, the flexor tendons being extremely tense, although when she was asleep they became slightly relaxed. On administering chloroform, however, the legs immediately became supple, and could be flexed and extended at will.

Dr. MacCallum prescribed:

R. Ferri el Ammon. Cit. gr. xlviij.

Tr. Valer. Ammon. ʒvi.

Aquæ ad. ʒvi.

A tablespoonful three times a day.

July 7th.—Chloroform was administered, and splints applied to both legs, so as to keep them permanently extended.

July 8th.—Patient quiet, but complaining of pains in the knees and of want of sleep.

July 15.—Stated that she now felt no pain whatever, and expressed a desire to have the splints removed.

July 19.—Splints removed without any inclination on the patient's part to draw the limbs up again.

July 21st.—No stiffness whatever in the knee joints, the limbs being capable of voluntary extension or flexion.

Patient attempted to walk, but from weakness was unable to do so.

July 22nd.—Still unable to walk. The threat of a cold water douche seemed, however, to render her more anxious to accelerate her cure.

July 23rd.—Can walk with ease the length of the ward; health and strength improving.

July 28th.—Walking very much improved, as well as general health,

Aug. 4th.—The patient walked out of Hospital to-day for home, as strong and well as ever.

Case of Abscess of Abdomen—Death—Autopsy—under care of DR. ROSS.

Harriet Bryson, age 41, born in England, was admitted to the Montreal General Hospital on Tuesday, the 2nd of September, 1873. She is a married woman; has had four children; has one brother living. Both her parents died of cancer—her father at the age of 62, of cancer of the liver, and her mother at 55 of cancer of the breast. She had always been rather thin and delicate, but usually in tolerably good health. Has been a hard smoker for a considerable length of time, and indulged freely in alcoholic drinks, especially brandy, till about six years ago. She then had an attack of delirium tremens, and in com-

pany with her husband went over to England where she recovered her former health, but not her intellect, her faculties having remained somewhat impaired, and are apparently defective at present. Since then she has been in the habit of using stimulants, but very moderately. About Christmas, 1871, she was delivered of a still-born child. At first all seemed to do well, but soon after she began to complain of cramps in her legs, and later of cramps in the abdomen, and a small hard cord-like tumour could be felt in the hypogastric region, but she consulted no physician and paid no attention to it, thinking that it might be due to cramps above mentioned, and that it would go away spontaneously. She has been rather feeble and sickly since then, but continued at her usual occupation till about the middle of last July, when, after a hard day's washing, she exposed herself to cold. Shortly after that having retired to bed in her usual health, she was taken through the night with severe cramps, and violent purging and vomiting. Without notifying any person of her condition she went down stairs and there remained suffering till about six o'clock on the following morning, when she was found by her husband in a state of collapse, her extremities cold and livid, and strength very much exhausted. A sense of fluctuation exists in the centre of the abdomen with marked tenderness on pressure all over the surface. She is very much emaciated, and has had amenorrhœa since the commencement of her illness. Previous to that time she had always been somewhat irregular. Her cough is more troublesome at night, and she does not rest well. Her chest was examined, but nothing abnormal could be discovered on the anterior surface, except feeble respiration posteriorly; bubbling rales were heard over the apex of both lungs, but smaller and more frequent over the right. There was no dullness on percussion. Her tongue is aphthous and slightly ulcerated. The roof of her mouth is also covered with an aphthous exudation. Her respirations are shallow, feeble, and about forty-eight per minute. Her pulse is small, compressible, and intermitting.

Her uterus is apparently quite healthy, and of the natural size. Her urine is highly acid. Specific gravity 1025, and contains no albumen. She had to be assisted up stairs. Her husband procured her a bottle of Dr. Crevier's Cholera mixture, which apparently gave her no relief. Soon after she was seized with a dry hacking cough which still continues. About the same time, in addition to the tumor already existing in the hypogastric, two others appeared in the left iliac region. The latter two, however, soon disappeared. The former continued to enlarge. At present it is of considerable size and occupies nearly a central position at the lower part of the abdomen, the slight deviation from the centre being towards the right. Its vertical diameter is about three inches, and it extends downwards from a point about half an inch below the umbilicus, leaving an interspace between it and the symphysis pubis. It is between four and a half and five inches transversely, and approaches a little nearer to the anterior superior spinous process of the right ilium than to that of the left. It has very hard edges.

Treatment ;—She was put upon milk diet, with wine 6 oz. and two raw eggs daily, and prescribed the following mixture : Acid Hydrocy., dilut, gtt. xii. Tr. Conii, ʒvi. Syr. Tolut ʒi., Aq. viii. A linseed meal poultice was ordered to be applied over her abdomen.

Sept. 8th. E.—Respiration 44 per minute. Pulse 116 ; Temperature 99°. She was given a hypodermic injection, containing morph. sulph. gr. 1-8.

Sept. 9th. M.—Respiration 40 ; pulse 112 ; temperature 98.2-5°. Rested well during night. Evening, respiration 48 ; pulse 120 ; temp. 100°. Morph. sulph. gr 1-8 was injected hypodermically. Fluctuation in the tumor becoming more and more distinct.

Sept. 10th. M.—Resp. 40 ; pulse, 110 ; temp. 100. Tongue still continues aphthous. Enjoyed a good night's rest. An exploratory puncture was made into the abscess by the needle of a hypodermic syringe, and it was found to contain pus, with bubbles of air, having a very fœtid and offensive

odor. The abscess was then opened, and about three ounces of this foetid, purulent matter removed. From a number of small dark specks which rolled out with the discharging fluid, and the offensive odor, the presence of foecal matter was suspected.

Sept. 10. E.—Resp. 44 ; pulse 120 ; temp. 99 4-5. Tongue dry and fissured. Rested well till about midnight. Had cold chills between 7 and 8 A.M. The tumor presented slight fluctuation. The tent was removed, and about two ounces of a thick, viscid, reddish brown substance, closely resembling foecal matter issued through the opening. Evening, resp. 62 ; pulse 120 ; temp. 99 3-8 °.

Sept. 12th. M.—Resp. 64 ; pulse 130 ; temp. 99 3-5. Tongue dry and thickly coated with a brownish fur. Sordes were beginning to collect about the teeth.

Evening, resp. 54 ; pulse 120 ; temp. 100 °. Tongue fissured and very sore. The mouth wash was discontinued and the following substituted : zinc sulph. gr. viii ; aq. rosæ ad. ʒviii.

Sept. 13. M.—Resp. 54 ; pulse 120 ; temp. 100 1-5. Tongue ulcerated and foul : she had been very restless during the night. The discharge from the abscess entirely ceased, and the tenderness on pressure and fluctuation have disappeared.

Sept. 13th. E.—Resp. 48 ; pulse 130 ; temp. 98. Tongue dry in centre ; edges, and tip covered with a yellowish fur.

Sept. 14. M.—Resp. 80 ; pulse 130 ; temp. 98. At 3 p.m. she died.

POST MORTEM.

Sept. 15th.—Lungs.—The inferior lobes of both were found to be consolidated and would sink in water. The cut surface was mottled with yellowish spots, which appeared to be minute localized abscesses, from which, when compressed a kind of a grayish-white, purulent matter exuded.

The heart, liver, spleen and kidneys appeared to be in a healthy condition.

The dissection of the tumour not having been made at the time of going to press, further description of it is deferred.

Reviews and Notices of Books.

Contributions to Practical Surgery. By GEO. W. NORRIS, M.D., late Surgeon to the Pennsylvania Hospital, Vice-President of the College of Physicians of Philadelphia, Member of the Société Médicale d'Observation of Paris, &c. 8vo., pp. 318. Philadelphia Lindsay & Blakiston. 1873.

The work before us is of value to the student of Surgical Science, inasmuch as the author collects together a series of papers on the occurrence of non-union after fractures; the statistical results of operations on the larger arteries; the statistical account of the cases of amputation performed at the Pennsylvania Hospital, and a general summary of the mortality following amputations. His researches extend over a period of thirty years.

These papers, be it mentioned, have already appeared, as contributions from the author's pen, in the *American Journal of the Medical Sciences*, and the *Pennsylvania Hospital Reports*. The author states in his preface, that the papers on the occurrence of non-union after fractures, and upon the statistics of operations on the larger arteries, have met with favourable notice from the profession, and have been freely made use of by writers, with but slight notice, in some instances, of their source. These facts have induced the author to cull together the results of his labour, and to throw them into book form. This is simply all that the author claims for his work.

We cannot help a feeling of regret, in looking over the statistical tables, to observe that a book published in 1873, and one professing to show the results of operative measures, should bring no more recent material than the experience of the past generation. Far be it from us to decry the value of the statistics of such names as Sir

Astley Cooper, Colles, Dupuytren, Liston, Aston Key, Syme, Porter, Brodie, Jobert, Mott, &c., yet there are those of our own day, whose statistics are available, and if embodied, would have added materially to the value of this work. It is a great disappointment to find that these statistics break off at 1844 or 1845. Thirty years of surgical experience appears to be lost, and you turn from the book with a sense of its incompleteness. Nevertheless, we would not seek to lessen the credit which is due to the author, for the manner in which he has performed the work which he has done.

The section of his work in which he treats of the subject of non-united fracture, is especially worthy of notice. He enumerates the various causes that have been given to account for the occurrence of this state of things, and cites cases under each heading, from the experience of many eminent surgeons. He thus goes on to mention the treatment which has been adopted at two different periods, and by different surgeons, to cause union, and finally reduces the many different modes to five, viz. :

1. Compression and rest.
2. Frictions.
3. Seton.
4. The application of caustic to the seat of fracture.
5. Resection of the ends of the bones.

He describes the cases in which each of these methods is peculiarly advisable, and also he recommends their occasional combination.

In the appendix to this division of his work, the author gives us in a tabular form, a number of cases of non-union after fractures, collected from English, French and American works and journals, in which he gives us his authority for each case, the surgeon's name under whose care it was, the treatment pursued, and the result, with various incidental matters peculiar to each. This table includes one hundred and fifty cases, and shows as he says, "probably, with tolerable accuracy, the success of the

seton and resection, though not of the other modes of treatment, which, being milder, were in several of the cases employed before the two first named, and more severe ones were resorted to."

From the tables and summary he draws the following conclusions:—

1st. That non-union after fracture is most common in the thigh and arm.

2nd. That the mortality after operations for its cure follows the same laws as after amputations and other great operations upon the extremities, viz.: That the danger increases with the size of the limb operated on, and the nearness of the operation to the trunk; the mortality after them being greater in the thigh and humerus than in the leg and forearm.

3rd. That the failures after operations for their relief are most frequent in the humerus.

4th. That after operations for the cure of un-united fractures, failures are not more frequent in middle aged and elderly, than in younger subjects.

5th. That the seton and its modifications is safer, speedier, and more successful than resection or caustic.

6th. That incising the soft parts previous to passing the seton augments the danger of the method, though fewer failures occur after it.

7th. That the cure by seton is not more certain by allowing it to remain for a very long period, which exposes it to accidents.

8th. That it is least successful on the femur and humerus."

He next discusses the treatment of deformities after fractures, and then gives the statistics of fractures and dislocations treated in the Pennsylvania Hospitals from 1830 to 1850. He then takes up the subject of compound fractures, and gives a statistical account of the amputations performed at the Pennsylvania Hospital, from January 1, 1850, to January 1, 1860. And also a general summary of the mortality following amputations in that institution for

thirty years. The last, and probably the most valuable, part of the book, is devoted to the statistics of the mortality following the ligature of arteries, and included in this part, is a table showing the results of pressure in thirty-seven cases of femoral and popliteal aneurisms, under the care of various surgeons.

The author has done his work so far as he has gone, in an admirable manner; but we cannot help repeating our wish, that he had extended his labours into more recent times. Perhaps he may be induced to do so, at a not distant date.

Lectures on Clinical Medicine, by A. TROUSSEAU, late Professor of Clinical Medicine in the Faculty of Medicine, Paris: Physician to the Hotel Dieu: Member of the Imperial Academy of Medicine, &c., &c. Translated from the third revised and enlarged edition, by Sir John Rose Cormack, M.D., F.R.S.E. Fellow of the Royal College of Physicians of Edinburgh, and formerly lecturer on Forensic Medicine in the Medical School of Edinburgh, &c., and P. Victor Bazire, M.D., Assistant Physician to the National Hospital for the Paralyzed, &c. Complete in 2 vols. 8vo., each pp. 925.—Philadelphia, LINDSAY & BLAKISTON, 1873.

A new edition of this world-renowned work is to be hailed as a boon by every one interested in the progress and in the literature of the science of Medicine. It is enough to say that these lectures are the digested results of many years of the intensest study and most careful observation, by one of the maturest and clearest minds that ever gave itself to the investigation of the human frame diseased. They have been now for so many years before the profession and wherever read are held in such high esteem—an esteem based upon the clearness and lucidity of their explanations, the easy and flowing method of their style, and the infinitely varied nature of the cases introduced for

illustration—that it would be a work of supererogation on our part to endeavour to point out their many excellencies and numerous beauties. This, however, is not a mere reprint of the lectures as hitherto published, for since the appearance of the edition produced under the auspices of the Sydenham Society many such important innovations have been introduced into the practice of the Medical art, that it became necessary to alter certain portions which had then become antiquated, and at the same time many additions have been made so as to include the results of more modern researches and observations. Among the most extensive additions are the following; and it will easily be conceived how replete with interest are the Clinical remarks of such a teacher as was Trousseau upon such important and at the same time unsettled subjects, viz: researches regarding temperature in diseases, particularly in eruptive fevers and dothineritis; granular and waxy degeneration of muscles; leucocytosis in typhoid fever; the spinal and cerebro spinal type of typhoid fever; the application of the sphygmograph in diseases of the heart and epilepsy; the laryngoscope in lesions of the lungs; and the ophthalmoscope in cerebral affections. The new material we can only say is fully worthy of being incorporated with what has gone before it. It would be invidious to particularize any special portion of the added writings; they all bear the impress of the same master-mind, and are well-calculated to sustain the far-reaching fame of their deservedly famous author.

It is admirably printed, well-bound, and in every way creditable to the publishers.

Visiting List for 1874:

We have received from Messrs. Lindsay & Blakiston of Philadelphia, their Visiting List for 1874. It is exactly similar to those which have been in general use for some

years past, and which so fully meet the requirements of every physician. There is ample room allowed for memoranda of all kinds, whilst each department is divided off and allowed its own share of space. The paper is good and it is neatly and carefully got up, as it always is. We advise our friends to provide themselves with copies at once.

Books Received for Review.

Hand book of Physiology. By William Stenhouse Kirkes, M.D. Edited by W. Marrant Baker, F.R.C.S., with two hundred and forty-eight illustrations. A new American, from the eighth enlarged English edition, 8vo, pp. 656. Philadelphia, Henry C. Lea, 1873.

Chemistry, Inorganic and Organic, with Experiments. By Charles Loudon Bloxam, Professor of Chemistry in King's College, London, with two hundred and ninety-five illustrations. From the second and revised English Edition, 8vo, pp. 700. Philadelphia, Henry C. Lea, 1873.

Chemistry, General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopeia. A Manual, &c., by John Attfield, M.D., F.C.S., Professor of Practical Chemistry, Pharmaceutical Society of Great Britain, fifth edition; revised by the author from the last English edition, 8vo, pp. 606. Philadelphia, Henry C. Lea, 1873.

An Introduction to Practical Chemistry, including analysis. By John E. Bowman, F.C.S., late Professor of Practical Chemistry in King's College, London. Edited by Charles L. Bloxam, F.C.S., &c., sixth American, from the sixth and revised English edition, 8vo, pp. 339. Philadelphia, Henry C. Lea, 1873.

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Diseases and Injuries of the Ear. A series of lectures delivered at St. George's Hospital, by W. B. Dalby, F.R.C.S., M.B., Cantab., Aural Surgeon to the Hospital ; with twenty-one illustration, 8vo., pp. 228. Philadelphia, Lindsay and Blakiston, 1873.

Lacerations of the Female Perineum, and Vesico-Vaginal Fistula ; their History and Treatment. By D. Hayes Agnew, M.D., Professor of Surgery in the University of Pennsylvania ; with numerous illustrations, 8vo. pp. 141. Philadelphia, Lindsay and Blakiston, 1873.

Correspondence.

BERLIN CORRESPONDENCE.

BERLIN, November 9th.

I ought to have written before, and let you know how things were progressing with me in this strange land. I am now in my fourth week of residence here, and I am beginning to feel quite at home, as much as one can, at least, among a lot of foreigners. I had a pleasant trip to Hamburg, and had time enough to do the City and Hospital, before starting for Berlin. Many things I saw that were of interest, but I shall have to reserve a more detailed account of them until a more convenient season.

I had some difficulty in obtaining rooms, and was a week at Topfer's Hotel, before I could get comfortably settled. Dr. Stadthaugen, to whom I had a card, very kindly aided me in my search, and I hope to remain at my present address until January 1st. Dr. Stadthaugen is a professor of the language, and I have been taking daily lessons with great benefit. He is a first-class man, and gets all the Embassy people, and I am making progress with him.

Living is quite as expensive, or more so, than in London. I pay £3 per month for my room, attendance and fire. My room is very comfortable, and nicely furnished. Four years ago, my friend Dr. Simon tells me, the same would have cost £1 10s. at the most, so that you see things have "riz" here as elsewhere.

While I was at Topfer's, a Dr. Mackenzie, a brother of Dr. Morell Mackenzie, came there, and we have struck up quite a friendship. He is from the London Hospital. His rooms are close to mine, and we read German together. By a mistake—a fortunate one—we thought that the term began on the 15th of October, instead of which, it was not until the 27th, and some classes not till November 1st,

so that we had time to see the city and get well settled. The city is passing fair, brick built, and stucco-covered, but the smells from open drains rise into your nostrils wherever you go. It is simply beastly, but I have now, I hope, become acclimatized. London is sweetness itself in comparison. It reminds me of some of the balmy odours which engage our nostrils in Montreal, in the spring and summer weather. The streets are wide, and the houses very large, and let out in floors or flats, but the pavement is wretched.

I had some four or five letters of introduction to present here, two of which were useless, as Dr. Ewers died the very day I arrived, and Dr. Pontfick, Professor Virchow's first assistant, left a few days previously, to take a chair in Poland. Dr. Klein gave me a letter to Dr. Güterbrick, one of the lecturers on Surgery, who has been very kind, and introduced me to several of the young men and to Professor Hensch, the physician to the Childrens' department. I was going with him last Wednesday night, to the Medical Society, but I was laid up with a cold, and was therefore unable to go. Dr. Sanderson gave me a very good letter to Professor Virchow, who received me very graciously, and told me to come to him whenever I wanted anything.

The Pathological Laboratory or Institute, is a large building in the grounds of the Charité, but more of it and Virchow in a future letter. Frerichs and Traube are the Clinical teachers, the former from 11 to 12, the latter from 9 to 11 daily. The patients are brought into the theatre, and their cases explained. Frerichs speaks slowly and plainly, and I gain much more information from him than from Traube, who goes at a tremendous pace. Westphal, the Professor of Nervous Diseases and Insanity, is a very nice man, and I went round with him a few days ago. He has the large number of 240 beds, of which 180 are devoted to lunatics, and the remaining 60 to patients with nervous diseases. He has, however, two or three assist-

ants to help him. Langenbeck's Clinique is in a separate building, but is also connected with the Charité.

Among the odd things here in domestic economy, are the breakfasts and beds. The national breakfast here consists of a cup of coffee and two diminutive rolls, but I soon altered mine into something more substantial. The beds are a wretched agglomeration of feathers—no sheets, no blankets, no quilts—but two feather beds, between which you must sleep and stew. It went against the grain at first, but I am now reconciled. Dinners are good, and as compared with London, cheap. We dine at Topfer's restaurant for 1s. 6d., as you could not in London under half a crown, and the things are put on the table in good style, although I cannot yet manage some of the dishes, such as raw meat and greens, and so forth.

After the first of January, I hope to go to Vienna, and then back to England. I expect to be in England early in May, as I shall not remain more than two or three months in Vienna. I am over head and ears in work now, but I will write soon at greater length.

W. O.

On continuous Discharges after Delivery.—Dr. A. Wiltshire says that these discharges are most common among patients of the poorer class, who are, by the exigencies of their lives, obliged to rise too soon from the lying-in-couch, and who are, moreover, as a rule, sadly under-fed, not only at and during childbirth, but before and after. More rarely are they met with in higher ranks of society, chiefly in constitutionally delicate women, or in persons who have become weakened by too rapid child-bearing, or other debilitating causes. All classes alike are apt to blame their medical attendant for the persistence for some time of sanguineous discharges, in the belief that they are due to negligence or want of skill on his part.

The cause of this condition is due, in the great majority of, if not all, cases, to subinvolution of the uterus.

Involution should progress equally in every part of the womb, so that at the end of the process the normal relative proportions should be maintained; especially does this apply to that portion corresponding to the placental site where the uterine wall is thicker than elsewhere. It is here, however, that the process most often fails, leaving a surface prone to discharge blood and other fluids; and it is here, the author believes, that the persistent "colored shows" and "waters" mostly originate.

These cases are characterized by the persistence, with it may be occasional remissions or intermissions, of a sanguineous (red or greenish) flow, which sometimes weakens the patient to the extent of interfering with lactation. Subinvolution is liable to persons affected with heart diseases and chronic diseases which are accompanied with marked congestion of the venous system, as chronic bronchitis with emphysema, congestive liver diseases, etc. Feverishness hinders involution, and Joulin says the process does not actively set in until the pyrexia due to the establishment of lactation has passed away. It is, therefore, important to arrest all pyrexial complications. As regards the constitutionally feeble, in whom all vital processes are slow, absorption and restitution are not likely to progress very rapidly when the debility, which is normal to such persons, is intensified by the exhaustion of parturition, and the usual insufficient or improper diet to which lying-in women are commonly condemned. For such is a liberal diet especially useful.

Bi-manual palpation and measurement show in these cases excessive bulk. Ordinarily this coexists with increased length, but cases have been noticed in which the length of the axis was normal while the uterus was broader. On the relation of flexion and version to this condition Dr. Wiltshire does not lay much stress, remarking that "such accidents do occasionally complicate these cases, and aggravate them considerably."

Under the head of preventive treatment the writer im-

presses the necessity of prohibiting too early rising, and next regulation of the diet, the quality of which should be inversely proportionate to the quantity taken, due regard being had for the existence of fever, as determined by the thermometer, the habits and inclinations of the patient, and her intention to nurse the child or not.

Under the head of curative treatment he recommends the recumbent position, a firm bandage to the lower belly, and rich diet. Occasionally cases are seen in which there is an excess of nutrition, and subinvolution disappears under a regulated diet, potash or lithia, and aperients, and anti-rheumatic remedies in patients of that diathesis. Ergot is recommended, and digitalis and strychnia in some cases complicated with heart lesions. Very striking results have followed the use of quinine, as suggested by Monteverdi. Gueneau de Mussy, at the Hotel Dieu, has of late used it with considerable success in eight-grain doses for atonic menorrhagia.

Some patients, whose nutrition appears to have failed seriously, improve wonderfully under arsenic. Anodynes, especially opiates, should be sparingly used. Syrup of iodide of iron is recommended as a tonic, sulphate of magnesia to keep the bowels opened, and local application of iodine to the hypogastrium when there is much pain. Injections, if used, should be copious, and the writer prefers cold to hot ones. Astringents may be introduced into these injections, if necessary, and good may often be derived from hip-baths, the author having a high opinion of seawater for this purpose, as well as for injections.—*The New York Medical Record.*

Rules for feeding babies.—The following excellent rules, on the feeding of babies in general, are extracted from an essay recently read by Prof. A. Jacobi, M.D., of this city, before the Public Health Association. The rules in question were prepared especially as a guide to the public, and coming from such a source, are more than ordinarily valuable. We wish they could be placed in the hands of

every mother and every nurse in the land. Embodying as they do the results of the experience of one of our highest authorities on the subject, they are also of particular value to the general medical practitioner. They are as follows :—

I. *Nursing Babies*.—Overfeeding does more harm than anything else. Nurse a baby of a month or two every two or three hours. Nurse a baby of six months and over, five times in twenty-four hours, and no more. When a baby gets thirsty in the meantime, give it a drink of water, or barley-water. *No sugar*. In hot weather—but in the hottest days only—mix a few drops of whiskey with either water or food, the whiskey not to exceed a teaspoonful in twenty-four hours.

II. *Feeding Babies*.—Boil a teaspoonful of powdered barley (grind it in a coffee grinder) and a gill of water, with a little salt, for fifteen minutes ; strain and mix it with half as much boiled milk, and a lump of white sugar. Give it lukewarm, through a nursing bottle. Keep bottle and mouth-piece in a bowl of water when not in use. Babies of five and six months, half barley-water and half boiled milk, with salt and white sugar. Older babies more milk in proportion. When babies are very costive, use oatmeal instead of barley. Cook and strain. When your breast-milk is half enough, change off between breast-milk and food. In hot summer weather try the food with a small strip of blue litmus-paper. If the blue paper turns red, either make a fresh mess or add a small pinch of baking soda to the food. Infants of six months may have beef-tea or beef-soup once a day, by itself, or mixed with other food. Babies of ten or twelve months may have a crust of bread and a piece of rare beef to suck. No child under two years ought to eat at your table. Give no candies, in fact nothing that is not contained in these rules, without a doctor's order.

III. *Summer Complaint*.—It comes from over feeding and hot and foul air ; never from teething. Keep doors and windows open ; wash your children with cold water at least twice a day, and oftener in the very hot season. When babies vomit and purge, give nothing to eat or drink for four or six hours, but all the fresh air you can. After that time you give a few drops of whiskey in a teaspoonful of ice-water every ten minutes, but not more until the doctor comes. When there is vomiting and purging, give no milk. Give no laudanum, no paregoric, no soothing syrup, no teas.—*The New York Medical Record*.

CANADA

Medical and Surgical Journal.

PARALYSED OR DRUNK.

Nothing is more common than to find in the London Medical papers notices of the mistaken arrest of individuals under the supposition of drunkenness, when in reality they had been suffering from some cerebral affection or the result of accident, and, whenever carelessness has been shown on the part of the proper functionaries in investigating the case, and when required, remedying it as quickly as possible, no scruple is felt in dealing out rebuke and censure to those in fault. And most important it is that the press—the medical press especially—should thus raise its voice to prevent the grievous injury of disgrace and imprisonment being inflicted upon any member of the community by those placed in authority for the repression and punishment of social abuses. The public have a right to expect, and the press have a right to insist that, where there is the faintest shadow of doubt in any case, every magistrate shall use all possible and reasonable circumspection, and shall not condemn to jail one who is physically afflicted as one who has committed a social crime.

A few weeks ago there arrived in this port a sailor who had, during a long voyage, developed the unmistakable symptoms of Locomotor Ataxia which had been threatening him for some time. The day following he left his ship, and was endeavoring, with the hesitating and uncertain gait peculiar to his disease to make his way to the General Hospital, when he was overhauled by a city policeman, and in spite of his earnest remonstrances, he was dragged to the station, charged with being drunk. On the morrow

he was presented before the Recorder, and when he again endeavored to explain the case, was told, on account of the difficulty of utterance under which he labors, that he was "drunk still," and was forthwith condemned (in default of a fine), to imprisonment in the common jail for one month. This punishment the hapless man was obliged to undergo, finding it impossible to get any one to listen to his story, although it must have been clear to all that his condition remained unaltered throughout. Immediately on his release he sought and obtained admission into the Hospital where he is at present under treatment for his malady.

The above statement we have from the man himself, and have every reason to believe it to be substantially correct.

Now, making in all charity, due allowance for the possibility of error, (even with some degree of care) on the part of the committing officer, is it not outrageous that this man should not have been brought before the jail physician and by him immediately discharged? Is no notice to be taken of the complaint of sickness of a poor prisoner (and here how unjustly such)? Is any sick man thus improperly committed to a prison beyond all hope of redress? Or is it simply that this particular person was a stranger and friendless?

Let the blame be put where it may, none can deny that a most serious injury and grievous wrong has been done to an honest man, whose only crime was to have been laboring under severe bodily affliction. We protest, in the name of humanity, against the infliction of such gross injustice, and we believe that the city could be obliged to remunerate the sufferer by substantial damages for his false imprisonment.

OUR HOSPITALS AND SMALL POX.

The necessity for the complete isolation of small-pox patients, one would think, was such an understood matter as to require but few words to be used to bring about its

practical enforcement by the authorities that be. Unfortunately, however, it has not been so in Montreal. It is years since the establishment of such an institution for the city at large was first spoken of, and still the first stone for it has yet to be laid. Up to the present time we have been obliged to remain content with the accommodation afforded by the wards set apart by the Hotel Dieu and the Montreal General Hospital—and although now it is found that this terrible disease is once more spreading in our midst we have no place to send such patients where they will be sure of not becoming the focus for the origination of an unlimited number of other cases. We say this advisedly, for, even at the General Hospital, where every reasonable precaution against contagion has been diligently carried out, yet, even there, not one, but several, cases have occurred which without any doubt had been derived from the affected persons within the small-pox wing. This has always been the case before, and will surely be the case again. It is incurring a very grave responsibility to oblige every such person entering the wards of one of our hospitals, to incur the entirely unnecessary risk of his contracting this—frequently dangerous—disease. The poor, when sick, must go to hospital until well—it is not with them a matter of choice. Is it not then a duty to see that the man who is poor and thus finds himself an inmate of our public wards, shall have every reasonable opportunity of deriving all possible benefit of the medical treatment afforded him there, without—unknown to himself—being hourly in danger of suffering from a disease perhaps infinitely more severe than his original complaint, if, indeed, it do not threaten his very life. Of course it is. Responsibility then, for this neglected duty, lies somewhere. Every one who, in any way, obstructs the laudable efforts of those who are desirous of aiding in the establishment of a general small-pox hospital—with the fundamental principle of complete isolation, and the most thorough quarantine regulations—voluntarily agrees to assume his share of the responsibility for the pre-

sent alleged cruelty and injustice. The matter has been discussed, and turned over again and again before the City Council and the Health Committee, the abstract principle of the propriety of erecting a building with the above-described conditions has been admitted, and a sum of money voted. But, unhappily, here the thing has ended; practically, we appear as far as ever from the realization of the only true idea of a perfectly separate infirmary. Again we see the authorities of the Hotel Dieu offering, for a consideration, to put up a building for the purpose in their grounds, and to see that it is isolated from the rest. We object to this—we do not believe that the isolation can be sufficient or complete. We protested against the erection of the present Molson wing of the General Hospital, on exactly the same grounds, and we can only say that we regret to find how fully our predictions have been verified in the latter case.

We protest in the name of humanity against the unnecessary delays and hindrances which this project is meeting with, and we trust before long to be able to announce that some satisfactory and definite action has been taken in the matter.

Tilden's Fluid Extracts,

We call attention to the advertisement which appears elsewhere, of the fluid extracts manufactured by Tilden & Co., of New York. We believe that these extracts are so well-known to the profession in Canada, as hardly to require a word of commendation, but although unnecessary, it is fully merited that we should bear our testimony to the uniform excellence of these preparations. No more positive evidence of our own confidence in the invariable reliability of Tilden's Extracts, can be given, than when we say that it has long been our habit, when ordering any of them in prescription, which are powerful, and therefore must be accurate, to insist upon having them from this laboratory, and we know that a great many physicians in Montreal do the same thing, and have never yet been disappointed.