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INTRODUCTORY LECTURE

DELIVERED AT THE OPENING OF THE FIFTY-FOURTH SESSION OF
THE MEDICAL FACULTY OF MCGILL UNIVERSITY,
OCTOBER 1, 1886.

BY FRANCIS J. SHEPHERD, M.D., Professor of Anatomy.

Gentlemen—It has fallen to my lot to welcome you to these halls in the name of the Faculty, and I do so with the greatest pleasure. Students, new and old, we are glad to see you here, and trust that none of you will ever regret having selected this school as the one in which to prosecute the study of that profession which will hereafter be your life's work. We know that you have come to us, not that after having spent a certain period of time here you may be able to write M.D. after your names, for if that were the reason, other institutions might be selected where the degree could be obtained more easily and in a much shorter time, but that you may obtain the best medical education that the country affords. Any student among you who has entered upon the study of medicine expecting to have a good time and pass four years in comparative idleness is vastly mistaken. We are all workers here, and want no drones; if there are any such, we beg of them to go home and start life anew in some other sphere more adapted to their tastes and aptitudes, for here the environment will not suit them. To all who come determined to work and learn, we extend a most hearty welcome. Your four years will not be easy ones, but when they have ended and you have received your reward, you will feel yourselves

amply repaid for all your hard work and close application, and will find that having commenced life well, the obstacles which arise in the future will be the more easily overcome. One great mistake made by students is to work solely for examinations; of course, this aim should not be altogether neglected, but it should not be the only one, for examinations are not the end of all things, and the man who, during his apprenticeship, endeavors to get the best knowledge of his subject irrespective of the examination bugbear will be the one who will succeed best in after life. Remember, there is something beyond the examination, viz., the practice of your profession; examination is only a crude method of testing a man's knowledge, and by no means always a certain one. When I was demonstrator of anatomy, and knew all my students personally, I could have easily picked out those who were fitted to become final men from those who were not, and I often found at the examination that it was not always the best men that came out at the head of the list. In many subjects, the man with the best memory takes the prize, not the one who afterwards proves most competent to successfully practice his profession or conduct scientific investigations.

There are two kinds of students: book students and practical students. With the former, lectures and books are most popular; and with the latter, work which trains the powers of observation and develops the investigating faculties. Now, neither class is to be altogether commended, but all of you should endeavor to make a judicious mixture (a chemical, not a mechanical mixture) of the two, and success will surely follow. If you depend solely on your memory, you will find that memory will be developed at the expense of the reasoning powers and the acquiring of scientific methods of thought. It is much better to understand your subject than to remember it, to know the why and the wherefore, and not say such a thing is so because you read it in a book or heard it in a lecture.

Speaking about lectures, I might here remark that lectures should not be too much depended upon for the acquisition of knowledge; they are only aids to knowledge, finger-posts to show us the way. As Mr. Guthrie remarked many years ago, "No man can

be taught any practical branch of learning by lectures ; they can only point out to him what he ought to learn, and by giving him a general knowledge of the subject, enable him afterwards to work it out practically." Three hundred years ago Malgaigne said, "'Tis the custom of pedagogues to be eternally thundering in their pupils' ears, as if they were pouring into a funnel, whilst the business of the student is only to repeat what the teacher has said." I have frequently seen students who could describe parts accurately in a written examination, unable to recognize the same parts when placed before them in an actual dissection ; they could also glibly go over the points of diagnosis between a hernia, hydrocele and a varicocele, and yet, when confronted with these diseases in hospital, be unable to recognize any one of them. These men had developed their memory at the expense of their powers of observation, trusted too much to book knowledge, and too little to practical work.

In this college, it seems to me that note-taking has always played too great a part, and that much energy has been wasted on it which might have been otherwise beneficially and usefully employed ; the cause of this, no doubt, has been the examination bugbear and the idea that the professor only examines on the subjects treated of in his lectures, and that he prefers students who answer questions in his own peculiar way. Now, in my opinion, there are no lectures so valuable that it is necessary for students to make a verbatim report of them. What he ought to do is this : the evening before, he should, in a good text-book, make himself fairly well acquainted with the subject of the next day's lecture, and then, if the professor throws any new light, gives more information about it, or puts the subject in a simpler way, to note these points down, he should also endeavor to put down the most important points treated in the lecture. I remember when a student spending much valuable time and giving much labor for the sake of having full and legible reports of all lectures. I have seen the error of my ways, and think that the only good this labor did me was to qualify me at some future time for a newspaper reporter or a lawyer's clerk. If the taking of accurate

and full notes of all lectures delivered be such an important thing to the medical student, then why not include shorthand writing in the subjects necessary to be passed at the preliminary examination. Now that I am giving advice, it might be as well to say a few words to the men who, this year for the first time, are entering upon the study of medicine. The old students, I dare say, are not so anxious for advice and having already had their opinions crystallized on many subjects, it would be a difficult thing to alter them. Well, I need not tell you that you have a severe course of study before you and the sooner you set to work to overcome the difficulties the better, you should not take it easy the first year because the examinations are not so severe as in the primary or second year, but make up your minds to work as hard during the first session as in the subsequent ones, and if you thus make a good beginning you will find the work each year becoming easier and the interest in it increasing. Habits of work thus early acquired are likely to be lasting. If, at the end of the first year, you find you have no love for your work, it would be far better not to go on with it, for your future success is very problematical. In the first year, you ought to get a good grounding on all the primary subjects; you should pay great attention to your practical anatomy, histology and other subjects, which are taught by demonstrations. I should not advise you to attend the hospital at all during your first session. Your attendance there with your present want of technical and other special knowledge will be of but little service to you, and will take away much valuable time from the study of those purely scientific subjects, which will form the foundation of all your future knowledge of medicine, and for the acquirement of which the time at your disposal is far too short.

In all your studies you should strive after exactness. Whatever you learn, learn well, and do not be satisfied with a general or superficial knowledge. In subjects such as anatomy, histology, physiology, etc., do not depend too much upon your books; verify their statements by your own work. Your motto should be, "Prove all things: hold fast that which is good." When I tell

you to strive after exactness I do not wish you to sacrifice other sources of knowledge for it. I have heard it said that many able diagnosticians are poor therapists simply because of their too great exactness, for remedies occasionally do good whose exact method of action we do not know. I have said a good deal about work, but I do not wish it to be thought that I disapprove of play. Recreation is necessary to most people, and taken in proper amount, like some remedies, is of great service. As a rule, few students need to be advised to take relaxation ; many, however, need much stimulus and pushing on to get them to work. Take recreation in moderation, but do not let such occasions, for instance, as the Winter Carnival interfere with your work ; do not neglect your physical culture, and remember the old saying, " *Mens sana in corpore sano.*" Join the University gymnasium, and do not neglect daily exercise in the open air. The importance of good food and fresh air cannot be too much insisted on. The necessary eight hours sleep should not be curtailed. Stimulants may be left out of the dietary as totally unnecessary. There is one kind of recreation which will prove of the greatest service to you in future when engaged in your profession, and one which is not sufficiently appreciated by students. I refer to the Students' Medical Society. Here you will have an opportunity of discussing various medical subjects and of reporting cases which you have seen. You will get into the habit of expressing yourselves more or less fluently, and of having your ideas and opinions exposed to the purifying fire of criticism. There is no one who cannot add to the entertainment of the meeting by stating some fact, reporting some case, and, if a first year student, describing some anatomical abnormality, etc. Students, by means of this Society, get to know one another and are stimulated to take a greater interest in the work of their future profession. I consider it one of the best accessory means we have of educating students. I advise you all to join the McGill Medical Society, to attend the meetings regularly, and let each one of you endeavor to make it a great success.

I little thought when, as a fourth year student fourteen

years ago, I sat on these benches and listened to the first introductory lecture delivered in this, then new, college that I myself would, at some future time, have to perform a similar duty. Yet so it has happened. Prof. Wm. Wright, in the course of an eloquent lecture delivered on the occasion to which I refer, spoke of the changes which had taken place in the school since its foundation as the Medical Institute in 1824; he then congratulated the students and professors on the magnificence of the building they were to occupy, and also described what constituted a well-equipped medical school.

It might be interesting to compare the present condition of the Medical Faculty with that of 1872, when it, for the first time, possessed a new and spacious building for teaching purposes on the University grounds. I have in my hand the calendar for 1872. Compare it with that of 1886. The great improvement in appearance and increase in size is a very good index of the present state of this school, which has, like nearly everything else, been evolved from something lower in the scale. In 1872 there were 11 professors, 1 demonstrator of anatomy, and an extra academical lecturer on hygiene. In 1886 we have 4 emeritus professors, 14 ordinary professors, 3 demonstrators of anatomy, 1 demonstrator of pathology, 1 instructor in laryngology, 1 instructor in diseases of children, 1 assistant to the professor of chemistry, 1 clinical instructor to the Maternity Hospital, and 1 assistant to the professor of clinical surgery,—in all, 22 men actively engaged in teaching, against 13 in 1872. Subjects are taught in a manner unheard of in 1872. Take, for instance, the chair of the institutes of medicine, as it was then called. In regard to instruction in microscopic work, in 1872, we thought ourselves fortunate if we once in the year, after waiting our turn for no inconsiderable period, saw the circulation of the blood in the frog's foot. Now there is a special course on histology and the use of the microscope, which every student is compelled to take. In 1872 there was no pathologist to conduct post-mortems at the hospital, and all that a student afterwards knew of practical pathology he picked up from post-mortems hastily made by house surgeons. He could graduate

without ever having seen a post-mortem. It is true that our present Dean, Dr. Howard, at that time, in his lectures on the practice of medicine, took every opportunity to illustrate his lectures with fresh morbid specimens, but these specimens were necessarily shown at the end of the lecture hour to a crowd of students who jostled one another, and of whom only the most *pushing* could see and hear much; the modest, retiring, and, perchance, hard-working and thoughtful student went to the wall. Now, every student has himself to perform post-mortems under the direction of the demonstrator, and no one can possibly go out of this college altogether ignorant of practical pathology. In addition to this, there is a special course of lectures on the subject and a demonstration of specimens every week. In 1872 the lectures on pathology were crowded into the last two or three days of the session, and were included in institutes of medicines. It was fully understood that no questions would be asked on this subject at the examinations.

In 1872, gynæcology was not taught as a separate subject, and students had but few opportunities of seeing at the hospital any special work, though at that time everybody dabbled in gynæcology. Now this is changed, and all have instruction in that most important branch of modern medicine. In this school we do not endeavor to make you all gynæcologists, but we wish you all to know something about gynæcology—a subject which is so often used by charlatans to work on the pockets and credulity of the female public, who are now conscious to an enormous extent that they possess internal genital organs, the different positions and conditions of which, according to our most eminent authorities, vary as greatly as the figures in the kaleidoscope, though all have a family resemblance. In other subjects, although the change and improvement in the teaching has not been so phenomenal, yet progress has been continuous. The lectures on practice of medicine were as able, eloquent and instructive then as now. The same may be said of surgery, midwifery, materia medica, and anatomy. The method of teaching these latter subjects, however, has much improved, and the student has the advantage of becoming more

practically acquainted with his subject,—the teaching is now less mediate and more immediate, to use Mr. Herbert Spencer's words. In practical anatomy, much improvement has taken place. In 1872 we only had one demonstrator; now we have three. At that time a student put in his time in the dissecting room more to get his ticket certified than to learn anything, and he had no fear of a future examination testing his practical knowledge of the subject. The dissecting-room was used more as a room for gossip and smoking than work; demonstrations were few and far between, and the anatomy of the internal organs was completely neglected. It was only those who thirsted for knowledge and had the spirit of investigators in them who managed to learn anything. Now, the dissecting-room is a real work-room, where students are taught anatomy by frequent demonstrations, and where diligent dissecting goes on from 8 in the morning till 10 at night. No man can now pass through this college without a practical knowledge of anatomy, and before coming up for examination he must furnish satisfactory evidence of two years actual work done in the dissecting-room.

The improvement in the clinical courses at the hospital is quite as marked as the improvement in anatomy. In 1872, the principal clinical teaching was by didactic lectures in the operating theatre, with the patients in the wards. There was but little systematic bedside teaching such as now exists, and the clinical examinations at end of session were far from stringent, being more on the lectures delivered in the theatre during the winter than on the cases in hospital. Now all this is changed, and by a process of evolution has reached a high state of development. The daily clinical teaching is most systematic, and it is one of the boasts of McGill medical school and the Montreal General Hospital that nowhere on this continent is so much attention paid to clinical teaching, and in no other hospital have students such great clinical advantages. I speak from a personal knowledge of the various hospitals of the United States and Canada.

The curriculum has been much extended since 1872; at that time it was possible for a student to graduate after three ses-

sions spent at college and one with a doctor, which latter really amounted to nothing but paying a fee of \$50 or \$100 to the doctor for a certificate of a year's study. Now, four full six-months sessions are required and one three-months summer session. I hope the time is not far distant when a second summer session (after the first winter) will be compulsory, and when histology, botany, and practical chemistry will be taught in that session. In this way we will be able to do all the practical anatomy in the day-time, and so avoid dissecting by gaslight and the taking away from students the early evening hours which should be devoted to study in preference to the later ones as at present. Night dissecting and night lectures are survivals of an old custom, when students followed other occupations in the day-time. In the early days of this school lectures were only given before nine in the morning and after six at night; and up to a few years ago, chemistry was still an evening lecture. Night dissecting is all that remains of this pernicious old custom.

The six-months session is another survival of old apprenticeship days. There is no reason why medical students should be idle for six months in the year; many forget in one six-months what they learn in another. The way to avoid this too equal division of work and play, is to have compulsory summer sessions in which the more practical parts of the profession are taught, and the student is not lectured at to excess. In this way his powers of observation can be cultivated and the knowledge acquired in the lecture-room tested by actual practice.

But to resume my comparison of 1886 with 1872. Students now enjoy many advantages in addition to the ones already enumerated, which were not even thought of 14 years ago. They are instructed in practical physiology and physiological chemistry. They can take part in the very interesting and important experiments continually being undertaken by the able and enthusiastic professor of physiology. At the University Dispensary they have an opportunity of seeing special clinics in diseases of children, nervous diseases, and diseases of the skin. At the hospital they can attend special courses on ophthalmology

logy and otology ; also, they can receive special instruction on laryngology and its allied branches. In summer they can attend courses on clinical microscopy, general microscopy, operative surgery, operative midwifery, operative ophthalmology, electro-therapeutics, clinical chemistry and bacteriology, without a knowledge of which latter at the present day a medical man is regarded as nothing worth. All these advantages are open to the students of 1886, and every one is invited to partake of the great intellectual and scientific feast which is yearly spread in so generous a manner, and with the digestion of which a moderate infusion of bacilli and microbes will not interfere but act as a piquante sauce. As you are aware the faculty has not been content with merely improving the curriculum, but the building itself has been almost doubled in its capacity, and, as regards laboratories; work-rooms, etc., has been arranged to meet the requirements necessary for teaching modern scientific medicine. A new Maternity Hospital is in course of construction in a convenient locality, and I am happy to announce that the day is not far distant when the old General Hospital will be replaced by one of greater size and of the most modern type ; we do not yet consider our course a perfect one or that the building cannot be still further improved in the future. It will be the perpetual desire of the faculty to introduce, as occasion offers, still greater reforms which will keep us abreast with the rapid scientific progress which characterizes the present century. He who imagines that the present state of affairs cannot be improved upon, or is sighing for the good old times, will never assist in that great advance which has during the last quarter of a century so remarkably distinguished medical and surgical science. Such people forget, or are indifferent to the fact, that the world moves, and will soon find that they are out of the stream ; stranded before half the journey is completed and like the wrecks one sees occasionally on dangerous coasts, serving as a warning to those that afterwards navigate the same seas. As with individuals so it is with communities, corporations and colleges—our motto shall ever be “ Excelsior.”

I should like to say something about the tendency of the

Colleges of Physicians and Surgeons of the various Provinces to restrict the number of students entering upon the study of medicine. It was publicly stated by a late president of the Ontario College that something must be done to prevent the over-crowding of the profession, and it was suggested, among other things, that the entrance examination should be made more stringent. The College of Physicians and Surgeons of Quebec have actually elaborated a scheme, which they hope to have confirmed by the Legislature when it meets, which, when enforced, will certainly have the effect of restricting the number of English students who will, in the Province of Quebec, be desirous of entering upon the study of the medical profession. The feeling seems to be this with the profession at present, "Now we are in, let us protect ourselves against too great competition by increasing the difficulty of entrance into the profession, so that the struggle for existence may not be so severe." This is a very narrow view to take of any liberal profession. Of course they are all over-crowded, but not with good men and earnest workers, for, as the saying is, there is always "lots of room at the top." The Colleges seem to think with Majendie, that "the doctor is often superfluous, sometimes mischievous, and occasionally fatal." They, of course, mean the doctor of the future, not the present. The inclination seems to be to increase the number of studies which are supposed to add culture to a man, such as philosophy (so-called), logic, metaphysics, belles-lettres, astronomy, geology, and even theology, and not to include those subjects the study of which are to be of benefit to the student in the after-acquirement of his profession. Now, it is my opinion that the preliminary examination need not be of a very exalted or elaborate character, that a man who has a good elementary knowledge of mathematics, Latin, English composition and spelling (of which but the smallest amount seems at present to be required), and one modern language and some elementary knowledge of the sciences, such as biology, physics and chemistry, is fitted to undertake the study of the medical profession. Where we should be most strict and severe is in the after-professional examination. No man should be allowed to graduate or be licensed to practice

with the small amount of knowledge required by many of the Examining Boards. Is it not absurd that at the preliminary examinations in this province that some 50 to 60 per cent. of students (including B.A.'s from the best universities) are rejected annually, while dozens of men are admitted to the practice of the profession with the smallest modicum of knowledge of medicine and surgery? I am certainly an advocate of extending the scope and character of the preliminary examination in the direction of giving it a more scientific character, and think that physics, botany, biology and elementary chemistry should be subjects learned before entering on the study of medicine, but this extension requires time, and more facilities for teaching these subjects are needed in the ordinary schools of the country before they can be included in the compulsory subjects of the preliminary examinations.

I have another fault to find with the various boards—that is, the character of their professional examinations. The examiners are selected not on account of peculiar fitness or knowledge of the subject in which they examine, but because of some medico-political, territorial or other reason, and the feeling that the good things ought to be distributed irrespective of the fitness of the man for the position. I should advocate that no one who does not teach should be an examiner, for it is chiefly the teachers who are *au courant* with the progress of the more scientific subjects, and who know what students should be examined in and how the subject should be treated. I have heard of medical men in a neighboring province being selected to examine on such a subject as physiology, and who, a short time before the examination, cram up certain portions of a text-book used when they were students, and perhaps some 15 or 20 years behind the times, and then examine on these portions. I think this system an iniquitous one, and the sooner it is done away with the better. These appointments should only be given to the best men, and men who have some reputation in the subject on which they examine.

Before closing this fragmentary lecture, I wish to say something about the subject in which I am particularly interested,

and which I have the honor to teach—viz., Anatomy. I know that the opinion is commonly held that professors desire to make the most of their own subjects, and to unduly magnify their importance; still, I think every unprejudiced man who has thought out the matter will admit that anatomy is the foundation on which not only the superstructure of scientific surgery is built, but also scientific medicine. Dr. Wm. Hunter, in an introductory lecture delivered over 100 years ago in London, said, “When we hear any man of the profession talking of all the knowledge of anatomy that is necessary for a physician, and of as much as a surgeon needs to know, we cannot but lament the singularly hard fortune of his patients: first, in being sick or diseased, and then, in falling under the care of so ignorant a counsellor. Who is the man of practice and integrity that can lay his hand on his heart and say that he has not, in some case or other, had occasion for all his anatomical knowledge; and who has not wished at times that he had been possessed of more? Who, then, are the men in the profession that would persuade students that a little of anatomy is enough for a physician and a little more too much for a surgeon! God help them! They have it not themselves, and are afraid that others should get it.” (*Hunter’s Introductory Lectures, Lond., 1784.*)

Anatomy forms the basis on which all other sciences, as physiology, pathology, etc., are built, and without an accurate knowledge of it no man can hope to become a scientific practitioner of medicine. There is no royal road to learning anatomy, and no easy method. The student must rely principally on his own exertions, for by constant and thorough dissections only can any real knowledge of the subject be acquired. Books are useful in so far as they tell the student what he should see and look for, and lectures enable the student to get a general view of the whole subject and to appreciate its more scientific aspects; but the kind of knowledge which remains with you longest, and is of the most benefit in the after practice of your profession, can only be obtained by assiduous dissection.

Gentlemen, you can never learn too much anatomy, and you will probably never have so good an opportunity as the present

for acquiring a real knowledge of this vast subject; so work while you can. After you leave college you may be able to continue many of your studies practically, but your chances of studying anatomy will be few indeed. In practice, it is possible to get along without much knowledge of microscopy, practical chemistry, physiological chemistry, botany, pharmacology, and even bacteriology, but without a knowledge of anatomy and physiology, "the practice of medicine and surgery must degenerate into the mere empiricism of the quack." Anatomy is not the dry subject it is usually represented to be. Studied in the light of modern science, especially when taken in connection with development and animal morphology, it opens up many new fields of inquiry and puts us in the way of solving many of these problems which are exercising the greatest minds of the day. What an intense fascination there exists in seeking for the explanation of the existence of rudimentary organs and muscles "primæval heirlooms," as they have been called, is known only to those who make the study of anatomy a labor of love.

Again, there are many disputed points in anatomy and many old errors in the books which have been perpetuated for centuries, and which it would be well for some of you to look into. Every year shows us how human anatomy, which was once supposed to have reached its finality, is advancing: the true anatomy of the brain is yet in its infancy, and surface and applied anatomy are departments quite modern in their origin. The exact position and relation of many of the organs are being only now determined by means of frozen sections. But I must not say anything more of this great and fascinating subject, lest I should excite the envy of my colleagues by inducing you all to become anatomists.

In conclusion, gentlemen, I again exhort you to be earnest in everything you do, and avoid frivolous superficiality. To use the words of that greatest of all Books, "Whatever thy hand findeth to do, do it with thy might: for there is no work, nor device, nor knowledge, nor wisdom in the grave whither thou goest."

SCROFULOUS OR TUBERCULOUS GLANDS OF THE NECK.

BY GEO. E. FENWICK, M.D.,

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(Read before the Canadian Medical Association, at Quebec, August, 1886.)

The lymphatics of the neck are frequently affected by simple inflammation from cold. They sometimes become sympathetically enlarged from some local irritation; but what are known as scrofulous glands are so intimately connected with tubercle, if, indeed, they are not actually tuberculous, that they demand a separate consideration.

The term scrofulous has never appeared to hold any very definite signification. It certainly cannot, *per se*, be regarded as a positive state of diseased action known or indicated by a certain set of signs and symptoms, but is rather a state of the system generally, a peculiar constitutional condition or diathesis, acquired or inherited, which subjects the individual to the invasion of certain well-marked affections.

The term scrofulous, as applied to enlarged lymphatic glands, does not indicate the actual condition of change in the gland structure. It is true that enlarged and caseating glands are constantly met with in persons suffering from what is termed scrofula or struma, but this state of enlargement and alteration in texture has long been recognized as due to or depending on the presence of tubercle. To discuss the history of tubercle would be foreign to my purpose, and would occupy more time than I have at my disposal. First definitely described by Bayle in the early part of this century, various theories and opinions have from time to time appeared. The discovery by Koch in 1882 or '83 of what he named the "tubercle bacillus," and which he has demonstrated as existing in all tubercle, has completely revolutionized the views tacitly admitted by pathologists as to the actual nature of this change in the tissues. Koch believes the bacillus to be the *materies morbi* of tubercle, so that the views held by Virchow that it requires evidence of the presence of miliary tubercle in connection with cheesy products to constitute true tuberculosis must be greatly modified, and it

is now held that all inflammatory changes, whether in a state of cheesy degeneration or not, if the bacillus of tubercle can be therein demonstrated, must be regarded as tuberculous. While I have confined my observations to tuberculous glands, I must state that there are many other structures which are liable to the invasion of the tubercle bacillus, and which are recognized as properly coming under the heading, not of scrofulous degeneration, but of tubercular infection.

In discussing the subject of the liability of the various tissues and organs of the body to the invasion of tubercle, Volkmann holds that the evidence of tuberculosis depends (1) on its well-known structural appearance, (2) on the presence of the tubercle bacillus, and (3) on the positive results given by experimental inoculation. There is scarcely any texture of the body which is exempt from the invasion of tubercle, and it would seem that the lymphatics are specially open to attack, since their very function, as it were, exposes them to infection. Clinical experience points to the liability of the tissues to this invasion of the bacillus. While this great fact is borne out by every-day observation, it is equally true that a peculiar aptitude or condition of the system must exist to favor the occurrence of the disease known as tuberculosis. We may believe that many, if not all, are occasionally exposed to the influence of the materies morbi of Koch, but it would appear that a suitable soil is essentially necessary in which the germ can develop and give rise to the various changes that have been noticed in its wake. To this state of special liability to the invasion of tubercle—to this peculiar diathetic condition the term scrofulous may be applied with some definite signification.

Of all the superficial glands, those of the neck exhibit a special aptitude to the invasion or development of tubercle. The glands of the axillary and inguinal regions are rarely affected. In the neck, the most favored localities are the submaxillary, the glands at the angle of the jaw, and those situated in the posterior triangle. Usually, when first seen, they are somewhat small, unless, indeed, they have for a time escaped notice, and have been left undisturbed, when they will occasionally attain a

considerable size. They are described as having been met with, several inches in diameter, although I must say that very large glands have not, so far, come under my own observation. They are rarely single, more frequently the entire chain of glands are enlarged, some being exceedingly small, but very distinct, and sometimes the glands on both sides of the neck are implicated. They present firm, painless, non-adherent growths, quite movable, and feel as if they were connected the one with the other, which in verity they are, by enlarged and thickened lymphatic vessels. Occasionally large masses are met with, made up of several small glands held together by dense areolar tissue, not, however, completely fused, as the capsule of each, although markedly thickened, is perfectly distinct. The centre of each gland, if examined, will be found to contain soft, cheesy matter, somewhat resembling the curd of milk. This I have seen in very slightly enlarged glands, so that it would appear to be an early condition of change, and is not evidenced by any inflammatory state, such as redness or excessive sensibility. If the enlargement is left to itself, or if irritated by some local application, suppuration will advance. The skin over the growth inflames, becomes red and tender, the abscess, for such it is, soon bursts, and a thin, curdy pus is discharged. The areolar tissue around the gland is involved, and the skin becomes adherent. The abscess cavity, after the discharge of its contents, may fill up and close. More often, however, an indolent sinus is left, with thin, purplish undermined edges, or the integument may ulcerate, giving rise to a troublesome and unhealthy sore, which heals with difficulty. This constitutes the well-known strumous ulcer. If the sinus or ulcer heals, it leaves a depressed cicatrix, which becomes adherent to the deeper tissues. Occasionally prominent papillæ remain bound down by cicatricial ridges or bands. Resolution, after a fashion, does, in exceptional cases, occur without suppuration and discharge of pus. The caseous matter becomes dry, the enveloping capsule becomes firm and dense, and an indolent, but somewhat unsightly, nodule remains, but which does not wholly disappear.

Another clinical feature of these so-called scrofulous glands

is the tendency to extension to other unaffected glands in their immediate neighborhood. The disease will show itself, it may be, in a single gland, and will in due course extend, so that the entire chain of glands become implicated, thus showing a marked contrast with enlarged glands from other causes, these latter are generally single, and do not tend to implicate others. Constitutional remedies do not appear to possess any controlling power, but, like a smouldering fire, the action will go on regardless of all attempts to arrest it by either local applications or constitutional remedies. The disease, if left to itself, or if treated by internal and local means, will be found to follow the same course as above described. Abscesses will form and open, sinus or ulcers be left, which in due course, if they do heal, will leave the part seamed, scarred and disfigured. While this local injury is in progress, we cannot prevent the infection of other vital organs, as this bacillus is in length about one-third the diameter of a blood-corpuscle, and in thickness it is stated to be one-fifth of its own length. A micro-organism of such a size is capable of entering the blood-stream, or of getting into lymphatic vessels, and of being carried to any organ or gland of the body. It naturally follows that if tubercle is in verity a mere inflammatory change due to the presence of this microbe, the sooner the microbe is removed the better, and the safer for the patient's life.

Very little is known concerning the actual mode of entrance of the microbe. Various theories have been proposed on this point, and perhaps all are correct, as they possess the semblance of truth. There is, however, one other fact in this connection to which experience points, which is, that individuals are not subject in the same degree to the chances of infection. It has been supposed that the bacillus may enter by the stomach or lungs, or some abraded surface, cuticular or mucous, and yet do no harm. The power of protection appears to reside in healthy-living tissue. But if there is some defect in constitution, some special vulnerability, the microbe meets with suitable soil, and will there develop. It has been suggested that the peculiar soil in which the bacillus grows may with propriety be called scrofulous, and that the seed itself, the consequences of its growth and the mani-

festations which follow, would more properly come under the heading of tuberculous. Another point of great importance is that concerning the development and multiplication of the bacillus. Koch has pointed out that the larger the number of microbes introduced by inoculation the more rapid will be the diffusion of tubercle, until it becomes general. He has also described the mode of multiplication of the microbe by fission and the formation of spores. Such, then, being assumed as true, it naturally follows that to delay the removal of an infected gland is to expose the individual to the risk of general tubercular infection. But we have positive evidence on this point: it is within the experience of most of us that phthisis in many instances can be traced to or connected with scrofulous glands of the neck, or some other tuberculous affection either of the bones or joints or of other tissues in which the local malady preceded the general diffusion. And I think we can record other facts in this connection in which the removal of diseased or enlarged glands or of tuberculous joints has been followed by general improvement in health. Such general improvement will follow after the healing of sinuses or ulceration, which is the sequence to the discharge of pus from a tubercular abscess.

But what a contrast is the part which is left to nature with that which has been early dealt with by the surgeon's knife. In the one instance, the individual, after being subjected to the risk of general tuberculosis, will recover with the part seamed and scarred in every direction with adherent and puckered cicatrices, and this probably after years of suffering; in the other, the disease is at once removed, the patient is to a certain degree protected from infection by the entire removal of the diseased tissue, and this at the expense of a simple and not hazardous operation, a week or ten days surgical treatment, and ultimately a scar, which is not more than a narrow, thin white line, and which in some instances is scarcely perceptible. This radical method of treatment is, to my mind, preferable to that adopted by some surgeons, as laying open the part and scraping all diseased tissue away. In cases where sinuses and ulcers remain, I should think the use of the spoon would be attended

with good results, but even in these cases where there remains a ragged opening with thin undermined edges, it appears to me that removal of the entire diseased mass, freeing the skin from deep attachments, and bringing the edges carefully together, is a better method of treatment than that by the spoon.

Mr. Treves recommends the use of the fine point of a thermo-cautery, which he thrusts into the gland and passes it in several directions in the gland tissue. This method I never have employed, and I must say that it appears to me an unsurgical proceeding. I should trust alone to complete removal by the knife, and I may say that so far, I have not met with any case in which the entire removal has not been applicable. After removal, the subsequent healing is rapid; very frequently two or, at most, three weeks has sufficed to produce perfect union, and the subsequent scar has been slight and in time scarcely perceptible.

CASE I.—On the 17th April, 1873, I was consulted by a gentleman, aged 27, with a large glandular tumor situated on the right side of the neck, extending as high up as the ear. It was nodular, firm, and appeared to consist of several glands held together by dense fascia; it was to the inner side of the sternomastoid muscle, and was quite movable. The tumor had been there for some two years, and had proceeded apparently from cold and exposure. For over twelve months he had been under treatment, various applications had been made, and the directions of his surgeon had been implicitly followed. He had taken iodide of potash, cod-liver oil, etc., without the slightest effect on the growth. When seen, the growth was the size of a goose egg. I recommended its removal, and the operation was performed on the 21st April, 1873. This man, although he had recently returned from England, was pale and looked out of health; he was weak, and unable to stand much fatigue. The wound united by first intention. It was before the days of strict antiseptic precautions. Silk sutures were employed, a drain was inserted, and the wound dressed with wet lint and oil silk. Four distinct glands were removed, and all were in a state of softening and contained pus. This I considered remarkable at the time, because there was no external evidence of such an event

as suppuration having occurred. The following autumn he returned with an enlarged glandular growth lower down, and apparently beneath the sterno-mastoid muscle. This was removed on October 13th; three small-sized glands were removed with ease without disruption of their capsule, and in each instance the gland was found in a condition of caseation. Recovery in this instance was rapid; the wound closed in the course of ten days. I met this gentleman during the early part of the present month, August, 1866. He is robust and healthy in appearance, and the two scars in his neck are so indistinct that they would be readily passed over by a casual observer.

CASE II.—March, 1874.—This was a young woman, aged 27. She had a glandular growth situated near the angle of the jaw on the right side. Had been under treatment for several months. The iodide of lead ointment had been used, and other internal remedies. She was pale, thin, and with a phthisical family history, her mother, a sister and a brother having died of phthisis. She consulted me in regard to the tumor, which was most unsightly. I advised its removal, and the operation was done on the 23rd March following. A single straight incision was made and three distinct glandular masses, softened and breaking down, were removed. A portion of the skin over the growth, which had thickened and was adherent, had to be taken away. Recovery was rapid. Six months after the removal this patient had greatly improved in personal appearance, and a very slight whitish scar was visible, but it was soft and non-adherent to the deeper parts.

CASE III.—M. R., aged 20, admitted into the Montreal General Hospital in April, 1883. This patient had been operated on before, and several glands removed from the upper part of the neck. There was a chain of glands, enlarged, extending down almost to the clavicle; two at the upper part, a little below the angle of the jaw, had supplicated, and several sinuses led into a lot of gland tissue, which was disintegrating and discharging. This gave her great annoyance, and had a marked effect on her general health. She was pale, anæmic in appearance,

had a very anxious, troubled look, and was very much depressed in spirits. I recommended their removal, and she willingly consented. The operation was performed on the 25th April. An incision to the outer side of the sterno-mastoid and reaching to the clavicle had to be made; from this quite a number of glands were removed—in fact, all that in any way were enlarged. Several were open and discharging pus, these being situated at the upper part of the wound; lower down they were small, but all had softened, and contained cheesy matter. With some considerable difficulty they were all removed, the edges of the skin pared and brought well together, and the wound dressed in the usual way after Lister's method. The spray was used throughout the operation and subsequent dressings. On reference to my note-book, I find that the wound had quite closed on the 15th May, but she did not leave the hospital for several days thereafter. I may state that this young woman is at present in robust health, and from being a weak anæmic girl, she is now making rich blood, and has greatly improved in appearance. The scar is white, but perfectly free, soft and pliable, and unattached to the deeper parts.

I have the notes of some eight cases in private, besides ten or twelve performed at the Montreal General Hospital, making over twenty cases that have come under my own observation. In all, the results have been quite satisfactory. The general health of all these patients has been greatly benefited by the removal of the glands. Several, from presenting an appearance of decided ill-health, ex-sanguine, anæmic, and in a state in which you would suppose a general break-up was threatened, have markedly changed for the better, and assimilation has greatly improved. Several of these patients have become quite healthy and robust, have increased in weight, and have in no way suffered from the removal of these important organs, which were in verity, before their removal, so damaged as to possess little, if any, functional activity. I cannot do better, in this connection, than endorse the conclusions of Mr. Pridgen Teale, in some very excellent clinical remarks made by that surgeon in reference to tuberculous glands: "That surgery can secure the

healing, in a very few weeks, of sinuses and cavities leading to diseased or tuberculous glands, even though they have existed for years, and that in cases of caseous and suppurating glands, the action of the surgeon should be vigorous and thorough."

REMARKS ON THE TREATMENT OF GONORRHOEAL OPHTHALMIA.

By F. BULLER, M.D., Professor of Ophthalmology, McGill University.

(Read before the Canadian Medical Association, at Quebec, August, 1886.)

The developments of bacteriology have given a new impetus to the therapeutics of eye diseases, and especially to the search after remedies suitable for the cure of the more severe forms of inflammation of the conjunctiva. Of these, the acute purulent ophthalmia caused by contagion of gonorrhoeal virus is undoubtedly the most dangerous and destructive. The severer cases of ophthalmia neonatorum might, perhaps, all be placed in the same category, and although we still, unfortunately, meet with many cases of loss of sight in one or both eyes from this affection, it is something to know that such a result is almost always due to neglect or improper treatment, for in the hands of competent ophthalmic surgeons a cure of this disease without loss of vision is, as near as may be, a matter of certainty. Not so, however, in gonorrhoeal ophthalmia of older persons. Up to the present time, so far as I can ascertain, no plan of treatment ever yet suggested will prevent great impairment or total loss of vision in a large percentage of such cases.

A review of the literature on this subject during the past five years would show an extraordinary divergence in the views of skilled therapeutists in regard to the treatment of this disease. Some use hot applications from the outset; others, constant cold applications until the inflammatory process is well on the decline. Some begin, continue and end with caustics and astringents; others eschew them entirely. Some employ caustics and antiseptics; others, antiseptics without caustics or strong astringents. Only on one point all are agreed; that is, the necessity for frequent cleansing of the diseased eye. And most are agreed as to the expediency of protecting the fellow eye by some mechanical contrivance if only one be affected.

Latterly there is a growing tendency to employ such remedies as are known to have powerful antiseptic properties. A complete list of the remedies more or less in vogue on account of their supposed efficacy in this direction would be a very long one. I will mention only those I have seen most frequently recommended in current literature. They are quinine, chloral, boracic acid, oil of cade, resorcin, red oxide of mercury, peroxide of hydrogen, salicylic acid, salicylate of soda, iodol, binoxide of mercury, carbolic acid, iodoform, and perchloride of mercury. Of these, the last three take the highest rank, and in the order given. There are plenty of cases recorded where acute purulent conjunctivitis, treated chiefly by one or other of these agents, has terminated satisfactorily, and sometimes the cure has been astonishingly rapid, but as yet no one has dared to vaunt them as specifics; this could only be done after a long series of the most virulent cases had been treated with uniform success. Such a series has, so far as I am aware, never been published, and if it had, I, for one, would remain sceptical until positive proofs of its truthfulness were furnished. Nevertheless, I have strong hopes we shall achieve such a result in time. As yet the treatment of conjunctival inflammations by so-called antiseptics must be regarded as a promising method still in its infancy. Assuming, for the sake of argument, that the various forms of conjunctivitis are characterized by, and perhaps dependent on, the presence of certain forms of micrococci, no one will pretend to say that we know all about these organisms from a therapeutic standpoint. What, for instance, are their differences in vitality or in their power of resisting germicide agents? Can we ever be sure of reaching them in such a structure as the conjunctiva so thoroughly as to destroy them without destroying the tissue in which they are working mischief. As long ago as 1881, A. Gräfe attempted to define the usefulness of antiseptics in diseases of the conjunctiva, and recommended their use (1) as a prophylactic, (2) in the beginning of contagious affections, and (3) where the disease tends to a croupous or diphtheritic character rather than a simple blenorrhoea.

In 1882 Lubrecht cleansed the eyes (in gonorrhoeal and oph-

thalmic neonatorum) with dilute corrosive sublimate solution, and found it beneficial, though it did not check the disease.

In 1884, Reich recommends weak solutions of corrosive sublimate as a disinfectant in blenorrhœa and other contagious affections of the conjunctiva, but he used strong solutions (1 to 3 grains to the ounce) in the treatment of granular ophthalmia, washing off the lids before replacing them, as in using strong solutions of nitrate of silver. I would here remark that it is a common practice to use stronger solutions of nitrate of silver in purulent than in trachomatous ophthalmia. Why, then, should we not pursue the same practice in the use of corrosive sublimate in acute blenorrhœa. Certainly we cannot expect to get its full effects as a germicide in the weak solutions hitherto commonly employed, not because the weak solution is incapable of doing the work under favorable conditions, but because the conditions are necessarily altogether unfavorable.

Pernice, in 1884, experimented on the cornea of rabbits with pus taken from a lachrymal abscess, and found its inoculation in the cornea produced deep ulcers and suppuration of the cornea, but if the same pus had been mixed for a while with a weak (1-10,000) solution of corrosive sublimate, it thereby lost its infective qualities. He therefore advocated such a weak solution of corrosive sublimate in the treatment of conjunctivitis and corneal ulcers; practically, however, I think it will be found so weak a solution is of very little value as an antiseptic in ophthalmic practice.

I have recently had an opportunity to test the efficacy of perchloride of mercury in three cases of acute blenorrhœa, two of which were clearly of gonorrhœal origin, and the third probably of the same nature. The results were, it will be seen, not altogether unsatisfactory.

CASE I.—A. D., aged 19, French-Canadian, admitted into hospital June 19th suffering from typical gonorrhœal ophthalmia in left eye of about one week's duration; self-inoculated; lids much swollen; copious purulent discharge, and chemosis of conjunctiva; cornea intact. Ordered ice compresses and the conjunctival sac to be washed out every hour with solution of

boracic acid, and every fourth hour with a solution of perchloride of mercury 1-2000. This treatment continued for four days with little or no visible benefit. A small transparent ulcer of cornea now visible. Ordered one application of solution of hydrag. perchloride, and afterwards the above treatment continued. The following day there was a marked improvement in the condition of the eye. Four or five days later, commenced the use of nitrate of silver, 20 grains to the ounce, once daily, in addition to the other remedies, and the patient was discharged cured on July 10th. Total duration of the disease, 24 days.

CASE II.—A little girl, aged 3 years, admitted into hospital July 28th with intense purulent ophthalmia of both eyes, of about two weeks duration in right eye and one week in left. This little patient had an acute vaginitis, and was therefore, in regard to the eye affection, probably self-inoculated. A similar course of treatment was pursued. There was some ulceration of right cornea on admission, but this never reached any serious dimension, and both eyes are now well of the disease without impairment of vision in either.

CASE III.—E. L., aged 16, a small lad for his age, admitted into hospital for rheumatism, which was found to be of gonorrhœal origin. Left eye affected with intense purulent ophthalmia of doubtful duration. Cornea, when the treatment began, said to be slightly involved at outer and upper part. The same treatment was prescribed and continued until I saw the patient myself about a week later. There was then an extensive slough occupying the outer three-fourths of the cornea; only a small portion at inner side not involved. I immediately changed the treatment by cold compresses to frequent applications of very hot fomentations. The sublimate lotion and the boracic acid wash continued as before, only warm instead of cold, and a two-grain solution of eserine instilled every two hours. From this time the destruction of the cornea came to a stand-still, and in a few days the slough was thrown off, revealing a very extensive ulceration of the cornea, with a perforation and small prolapse of iris at the upper and outer part; a shallow anterior chamber

with a small pupil dimly visible through the semi-transparent ulcerated surface. The ulcer is rapidly filling up, and a subsequent artificial pupil at the inner side of cornea will probably secure useful vision.*

In the first two cases the result was all that could be desired and certainly afford encouragement for a further trial of the same plan. The prompt effect of the solution of perchloride 1-1000 when 1-2000 did not seem to be working well, is a significant fact, and leads me to hope that the stronger solutions used cautiously may shorten the course of the disease. If there were any way to protect the cornea from the action of strong solutions and at the same time make a thorough application to *all the diseased surface*, I have little doubt the salutary effects of perchloride solution would be much more apparent.

It is obvious that repeated and thorough cleansing of the eye must always take first rank in any plan of treatment, and this is where failure most often comes in, the medical attendant satisfying himself with general directions, without taking the trouble to see that they are strictly carried out.

What percentage of persons suffering from gonorrhoeal ophthalmia have the undivided attentions of two or even of one nurse? and yet the best authorities lay down this thorough attention as the chief essential to successful treatment. Though a firm believer in the utility of cold applications, I cannot leave the subject without calling attention to the urgent necessity of watching the condition of the cornea during their use. If at any time any considerable cloudiness of the cornea, or a considerable area of dense opacity with or without loss of substance, or even if considerable ulceration occurs without opacity, as is often seen in the form of a crescentic furrow close to the corneal margin, then the cold applications must immediately cease and be replaced by frequent fomentations with very warm water. In this way a cornea otherwise doomed to destruction can often be saved, in part at least, and, perchance, though but a wreck of its former self. Some vision may be retained and the patient spared the misfortune of a shrunken and sightless eyeball.

* The prognosis given here has been justified by the result. The eye is somewhat blanched, but still quite useful as a visual organ.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

PREPARED BY WM. GARDNER, M.D.,

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Alexander's Operation.—One of the latest contributions to the literature of this operation is a paper by Professor Polk of New York, in the *New York Med. Record* for July 3rd, 1886. Dr. Polk's paper is based on 15 cases he had performed at that date. He reports some observations very pertinent to the subject, by his colleague Prof. Williston Wright. The outer two inches of both ligaments removed in one of Prof. Polk's cases were handed to Prof. Wright that he might test their strength by attaching weights to them. This was done, and he reported that one of them broke only when the weight had reached five pounds; the other at four and three-quarters. It will be remembered that the portions tested were the weakest parts of the ligaments—the outer ends. By the time the break had occurred they had become stretched to about twice their usual length, but stretching did not begin until the weight had reached $2\frac{3}{4}$ lbs. in one case and 3 lbs. in the other. Dr. Polk remarks "if now we remember how much less than 3 lbs. any prolapsed or retroverted uterus will weigh, it is seen that any part of the ligaments is sufficiently strong to answer the objects of the operation." Dr. Polk had an opportunity of examining during an operation for removal of the uterine appendages, and observing the complete success of a previous shortening of the round ligaments in supporting a uterus dragged down and weighted by a myoma on its posterior wall.

The result of pregnancy in nowise undoing the effects of the operation is now a matter of experience. Neither is the function of the bladder in any way deranged. Dr. Polk appends brief histories of the 15 cases. He sums up the indications for the operation as follows: "Prolapse of the uterus; retroversions and retroflexions of the uterus, in which the organ can be placed in the normal position, and yet a pessary cannot be comfortably worn; prolapse of the ovary, the organ being reducible, and not large enough or diseased enough to demand removal." He

prepares his patients by dieting and cathartics, as for ovariectomy. He operates as Dr. Alexander directs, and has not had any difficulty in finding the ligaments or drawing them out. He advises aseptic vaginal tampons to retain the uterus and take off the strain on the ligaments for the first 48 hours. Patient to be kept in bed one month; to avoid straining for six months, and be very moderate in sexual intercourse. Contrary to some operators, he thinks the operation neither dangerous nor difficult, and a valuable addition to our resources for the relief of these conditions.

Gonorrhœal Tubo-Ovarian Abscess.—Dr. Howard A. Kelly of Philadelphia reports a case treated by laparotomy and removal of fallopian tube and ovary. The paper appears in the *Phila. Med. News* for August 21st, 1886. The case is interesting, as being one of very difficult nature, admirably and successfully managed. The disease began two weeks after marriage, at the first menstrual period, with severe pain in the hypogastrium. There was profuse, protracted and painful menstruation, with foul-smelling discharge. A careful bimanual examination revealed the uterus erect, fixed, and forced strongly to the left of the pelvis. A boggy, firm mass occupied the right and back sides of the pelvis. Rectal tenesmus was severe. These symptoms had continued for many months, with great failure of general health. The operation was tedious and difficult from extensive adhesions. During removal of the mass, which was an abscess of the tube and ovary, it burst, and a discharge of very foetid pus took place. This was removed, the tube and ovary ligatured, and the pus-secreting surface on the floor of the pelvis scraped thoroughly with the finger. The abdominal cavity was thoroughly washed out with warm water, and a glass drainage-tube carried to the surface, whence the diseased mass had been removed. The patient was quite ill for two days, and then made a rapid recovery.

I saw, during the present summer, Mr. Thornton of London treat a similar case, except that the abscess cavity communicated with the vagina. The pus in this case was horribly foetid. The pus secreting surface, after the ligature and removal of the diseased tube and ovary, was dosed with strong iodine and cor-

rosive sublimate solution, and then the abdominal cavity thoroughly washed out and drained. This case also recovered.

Extirpation of a large Polypous Myoma of the Uterus by Laparotomy.—This is the title of a short paper in No. 31 of the *Centralblatt für Gynäkologie* for the current year. The author is Dr. W. Nagel. The case occurred at Dr. A. Martin's private klinik for diseases of women in Berlin, and he was the operator. The paper first presents the report of a fatal case of vaginal removal of a similar tumor. Total necrosis of the recto-vaginal septum had occurred as a result of the severe injury the part sustained during extraction, aided by the anæmic condition of the patient. This induced Dr. Martin to try another procedure. The patient, aged 55, had had for many years profuse menstruation. This had ceased in 1884, but for two years there had been a profuse, foetid, purulent and bloody vaginal discharge. A nodular tumor filled the pelvis and extended above the umbilicus. The vagina was very narrow and rigid from senile changes. Operation on the 10th July, 1886. Abdominal section and eventration of intestines, which were covered with a warm carbolized towel. The uterus and tumor were then packed about with sponges and drawn forwards, and the posterior wall of the uterus cut open and the tumor enucleated. The uterine mucosa was then disinfected and curetted, and the vagina thoroughly washed out. The uterine wound was next closed by a continuous silk suture. Bleeding was not severe at any time. Careful toilette of the peritoneum and closure of the abdominal wound, which completed the operation in 32 minutes. The tumor was a pure myoma, weighed 940 grammes, and measured 19 x 12 x 8 centimetres. The patient recovered without a bad symptom. There can be little doubt that in certain cases, as under the conditions of the vagina in this case, the method of operation here adopted is much the safer.

Removal of the Ovaries for Cavernous Myofibromata.—There is no doubt of the great frequency with which myomata have their symptoms removed and shrink very much or completely disappear after this operation. Such a result has not been so certainly known with reference to cavernous myofibromata, but two very successful cases have been recently reported

One of them was performed by Prof. Saxaiger. Another, by Prof. A. J. Lebedeff, was recently reported from St. Petersburg by Goldenberg. Castration was selected in preference to hysterectomy, because of its greater safety and frequent success in ordinary myoma. The result thoroughly justified the decision. For six weeks after the operation there occurred repeated, irregular, comparatively slight losses of blood, then complete menopause. The tumor gradually shrunk, and on dismissal of the patient six weeks after the operation it was reduced to the size of the head of a six months foetus. Health was completely regained at home. These cases are an important contribution to the literature of this most valuable operation.

The Treatment of the Hysterical Paroxysm.—Ruault of Paris, in the *Abeille Médicale*, No. 42, 1885, describes a method he has found most successful. It consists in forcible compression of some superficial nerve, especially at its point of emergence. The most suitable is the supra-orbital. The head of the patient is fixed with both hands, the thumbs being applied over the supra-orbital notches, where they are made to exercise steadily increasing pressure. The effect is as follows: The patient begins to twitch the facial muscles, she shrieks, two to four short inspirations occur, the thorax remains a few seconds in the condition of inspiration, simultaneously the muscles of the back contract, extending or hyper-extending the spinal column, then follows a deep expiration, the muscles relax, and the fit is over. In many cases the compression must be repeated, as the fit recurs. The method is more efficacious the earlier it is applied after the commencement of the fit. Ruault succeeded by this method in arresting an attack of hysterical dyspnoea with threatening asphyxia, and in the same patient an attack of delirium with hallucinations.

Drainage of the Vagina in Carcinoma of the Uterus.—Dr. Wyman of Detroit (*Medical Age*, No. 22, 1885) has repeatedly succeeded in arresting the foetor of the discharges in this disease, by laying a drainage-tube in the vagina. The outer end of the tube is enveloped in a mass of cotton wool, which is frequently changed. Not only was the foetor controlled, but the general condition of the patient was often sensibly improved.

The Prevention of Pendulous Belly in Women.—Sceptics as to the efficacy of the obstetric binder in preventing this condition may be interested in some observations of Prof. Czerny of Heidelberg which appear in the *Centralblatt für Gynäkologie*, No. 3, 1886. The professor states that he frequently has occasion in private practice to see English women, and that he has often been struck by the tense condition of the abdominal muscles even after repeated pregnancies, while German women, even after a few pregnancies, present quite the opposite condition. A year ago, while examining an English lady, the mother of nine children, whose figure was equal to that of any young girl, he was particularly struck with the fact, and on expressing his amazement, the lady described the English custom among the upper classes of invariably applying a firm binder immediately after labor, and keeping it accurately applied for at least eight days. Prof. Czerny in consequence strongly advocates the use of a binder not only during the first week after confinement, but for several weeks afterwards, and concludes by alluding to the great importance of maintaining the integrity of the abdominal muscles, if child-bearing women are to be kept in health and comfort.

The After-treatment of Severe Laparotomies.—Prof. Müller of Berne read a paper on this subject before the first meeting of the German Gynæcological Society, held at Munich last June. Müller spoke of the complications referable to interference with the functions of the intestinal tract as being the most important and the commonest. These arise from inflammation about the pedicle and adhesion of coils of intestine to the pedicle or other raw surface. Especially dangerous in this connection are those cases in which extensive raw surfaces are left by the separation of adhesions of long portions of intestine. Prolonged rest of the intestine after the operation conduces to adhesions. He had seen two cases fatal from this cause. To reduce the danger to a minimum, he advises omitting the bandage and any other means for the compression of the abdomen, and further believes that good may be done by injecting into the abdominal cavity for the first few days an aseptic, non-irritant, non-toxic and

easily absorbable solution. In one case he injected a sterilized 0.7 per cent. solution of sodium chloride in the quantity of 2,400 grammes. The immediate effect was acceleration of pulse and respiration. These were due to rapid absorption, not sepsis. This could be prevented by repeated injection of moderate quantities of fluid and allowing it to escape through a drainage-tube. (*Cent. f. Gyn.*, No. 26, 1885.)

I cannot but think that such a practice is unnecessary if opium be entirely withheld and purgatives and repeated turpentine enemata be administered to stimulate the peristaltic action of the intestines. There can be no doubt that the routine use of opium has cost ovariologists many lives from the enforced rest of the intestinal tract permitting the formation of adhesions.

A new Surgical Treatment of Retroflexion of the Uterus.—(*Berlin Klin. Woch.*, No. 18, 1886.)—Von Rabenau died on the 13th April, 1885, and left the manuscript of a paper describing a new operation for this deformity. He advises it in those cases (by no means rare) in which, for various reasons, a pessary is not available. It consists in excision as high as possible, say 4 cm., of the anterior wall of the uterus. The immediate effect is to straighten the uterus completely, which is explained by the fact that in retroflexion the greater convex anterior wall is so diminished in extent by the excision as to become smaller than the posterior. After the operation, the posterior wall becomes convex and the anterior concave, which corresponds to natural conditions. So much for the theory and anatomical basis of the operation as laid down by the author. The three operations he performed were done by him when suffering from a painful disease, and he had not the opportunity to observe the results. Peltzer, his assistant, reports the result in the total six cases, three of which were done by himself. It was, as a general rule, unsatisfactory. Obviously it is unsuitable for young women, inasmuch as the mutilated condition of the uterus must seriously interfere with the function of child-bearing.

Hospital Reports.

MONTREAL DISPENSARY—DEPARTMENT OF
GYNÆCOLOGY.

CASES UNDER THE CARE OF DR. ALLOWAY.

CASE I.—A handsome, well-nourished young woman, aged 20; married two years; has never been pregnant; complains of headache, pains in iliac and lumbo-sacral regions, a tired feeling and inability to do her ordinary housework. Her menstrual periods are fairly regular, sometimes, however, returning in the third week. The flow is profuse, as a rule, and is preceded by severe dysmenorrhœal pain, which decreases in severity as the flow becomes well established. Dyspareunia and frequent micturition complained of.

Examination.—External parts small; cervix normal; no catarrhal discharge, nor erosion. Cervix very low down in the pelvis, and looking in the direct axis of the vagina or pelvic outlet. The fundus inclines backwards in a slightly retroverted position. In examining the fornices with the finger, the uterus and whole pelvic floor seem much limited in movement, and exceedingly tender, the patient evincing severe pain on upward pressure. In the position of the base of each broad ligament is felt the so-called induration or callosity of chronically inflamed tissue. The posterior *cul-de-sac* is practically obliterated, and the part is exceedingly tense.

Diagnosis.—Chronic pelvic peritonitis, probably involving the ovaries and fallopian tubes to a slight degree, and originating from a past attack of endometritis.

Treatment.—The treatment of this case consisted in columning the vagina carefully with a tampon of boro-glyceride. The tampon was applied twice a week, and beginning with slight pressure, gradually increased until, in the space of ten weeks the whole vaginal vault and pelvic tissues generally, were quite pliant, moveable, and free from pain on digital pressure. I should have liked to have now dilated forcibly the cervix and curetted the endometrium, but as the patient had no comfortable home, I discharged her practically in good health.

Remarks.—These simple cases of chronic pelvic inflammation, so long as they are not due to gonorrhœal infection, do very well on the boro-glyceride tamponade, care, however, is required not to begin with too much pressure, as you will be likely to set up a fresh attack of acute inflammation. The curative agents at work here are glycerine, through its affinity for water, and graduated pressure upon the œdematous and thickened tissue.

CASE II.—This case was a well-nourished young English-woman, aged 22. She had been married three months ago, and was now suffering from a most violent attack of acute gonorrhœa. There were no lumbar and iliac pains complained of. The vagina was intensely inflamed and discharging a creamy, purulent fluid. After the vagina was well irrigated, the os was seen to be discharging a glairy mucus, tinged with blood, and the lips inflamed and eroded. Further examination of the parts was not made at this sitting.

Treatment.—A small-sized Ferguson's glass speculum was introduced into the vagina, and a 40-grain solution of silver nitrate poured into it. This was done three times a week for the following two weeks, with warm water irrigations three times daily by the patient herself. She was now considered cured of the vaginitis and a digital examination made to ascertain the condition of the pelvic peritoneum and appendages. A most interesting condition was now discovered. The uterus showed all the evidences of Hegar's sign of early pregnancy, and on questioning the patient she acknowledged not having menstruated for eight weeks. To determine when this woman became impregnated is of some interest. It must have been before the attack of gonorrhœa showed itself, probably after the first coitus. It is also interesting to know that this fortunate impregnation saved her from the most serious injury which a woman can become affected with—gonorrhœal salpingitis, peri-ovaritis, and pelvic peritonitis, with purulent collections and adhesions in the pelvic cavity. From an obstetric view, she will also become an object of much interest during the puerperium.

CASE III.—This was a French-Canadian, aged 44. She had

the appearance of a woman who had suffered from excessive hemorrhage. She was very fearful of an examination being made, from a morbid dread of pain. She had been married seventeen years; had had five children at full term, and one miscarriage. Her youngest child was eleven years of age, and the miscarriage occurred about nine months after birth of this child. Since the birth of last child she has not been well; has had a profuse leucorrhœa to the present time. She ceased menstruating regularly about two years ago, but some nine months ago she experienced a very excessive flow, lasting almost continuously for three months. Since the cessation of this flow she has had no discharge of blood. She now complains of very severe pain in back and sides, so severe as to give her the appearance of a cripple coming into the room. She has constant attacks of retching, as a reflex neurosis, which causes her to have a starved look. On examination, a badly retroflexed uterus is found. The fundus is enlarged and exceedingly tender. The cervix has been lacerated bilaterally, but has cicatrized. There are no evidences of intra-pelvic adhesions, and the fundus is replaced to its normal position by placing patient in the genupectoral position, pulling the cervix well upwards towards the coccyx with a volsella, and forcing the fundus downwards and forwards with a finger in the rectum. In order to retain the uterus in this position, the vagina is tamponed in such a way as to prevent the fundus falling back again. This treatment was being carried out for some three or four weeks, the tampon being renewed once a week, when a return of the hemorrhage set in. The flow was continuous and severe for ten days, at the end of which time I curetted the uterus thoroughly with the sharp instrument, removing quantities of large and small fungosities. The uterus was then irrigated with 1 to 2000 sublimate solution. This metrostaxis was checked for about ten days, when it again became profuse. I again curetted and removed a large quantity of villous growths. Examination of these little bodies (millet seed) showed them to be of a benign nature histologically, and would indicate an *endometritis polyposa* of Olshausen. This interesting and prevalent uterine affection attacks the body of the organ

only, as a rule. It is not confined to married women who have borne children, but is found often in maids past the menopause. A profuse leucorrhœa at this time is one of the most prominent and unpleasant symptoms complained of. It is a prominent link in the chain of pathological changes beginning with cervical laceration, then subinvolution, hyperplasia of stroma and mucous membrane, proliferation of glandular elements, vegetations and hemorrhage. It is here important to state that we must begin the treatment in the inverse ratio; beginning with removal of vegetations, and discharging the patient after the repair of the cervical laceration. The patient in question has had no more hemorrhage since last curetting (six weeks ago). She is improving in health, and will shortly be operated on for the cervical lesion, and replacement of the uterus.

CASE IV.—This patient is unmarried, aged 23, tall and spare. Her menses have been regular, but very scanty, lasting only one and a half days as a rule. There is leucorrhœa during the intermenstrual periods, also some irritation of bladder. She complains of backache, pain in inguino-ovarian and submammary regions, headache, and constipation. She is a bottler in a patent medicine establishment, and cannot do her work, although it is not very laborious. Vaginal examination reveals a cervix extensively eroded, and a thick glairy mucus issuing from the os. The pelvic floor is tense and very tender to digital manipulation, but no distinct intra-pelvic nodules can be felt. The uterus is in its normal inclination forwards, but much limited in its movement, and painful when moved with the sound. This patient left the klinik without treatment, but returned in two months afterwards much worse. There was now a slight vaginitis, which was not gonorrhœal. She was advised to remain at home in bed for a week under Emmet's treatment of hot-water irrigations three times a day. At end of this time she appeared at the klinik much better. The pelvic floor was, however, still tense and exceedingly tender. The boro-glyceride tampon was gently applied, so as to raise somewhat and support the inflamed parts. This treatment was continued for two months, reapplying the

tampon twice weekly. The pelvic floor was now quite soft and free from tenderness on pressure. The uterus, with a volsella fixed in the cervix can be elevated, and drawn down almost to the introitus of vagina, without causing pain. It was now thought safe to curette the endometrium, removing shreds of hyperplastic mucous membrane. The uterus was irrigated with sublimate solution as usual after curetting, and the patient discharged after a few applications of Churchill's iodine during the following two weeks. I do not think this patient had gonorrhœal disease, because the pelvic inflammation would not have subsided, with that disease as a cause, as it did. The cause here, in all probability, was a continued series of recurring pelvic congestions from cold, fatigue, and such like accidents, beginning as a vaginitis or endometritis, the diseased condition passing up the fallopian tubes to the peritoneum covering the ovaries (periovaritis), broad ligaments and adjacent parts. In time there is an exudation of plastic matter thrown out, causing all of these parts mentioned to adhere together in one organized conglomerate mass. In very chronic untreated cases, these masses are felt through the fornices of the vagina, especially when due to gonorrhœal disease, and were supposed to have been situated in the parametric tissue proper of Virchow (*Emmet*), but are now incontestably proved to be due to agglutination of the ovaries, fallopian tubes, and any part covered with peritoneum falling into the pelvis (*Polk*). If this condition is recognized early, and it is not due to gonorrhœa, then, under the treatment described and carried out in the present case, organized adhesions may be avoided and the patient relieved. This relief, however, may not be permanent, rendering treatment necessary on return of the disease.

Reviews and Notices of Books.

Paralyses: Cerebral, Bulbar and Spinal. A Manual of Diagnosis for Students and Practitioners. By H. C. BASTIAN, M.A., M.D., F.R.S., Professor of Clinical Medicine and Pathological Anatomy in University College, London; Physician to University College Hospital and to the National Hospital for the Paralyzed and Epileptic, &c. With numerous illustrations. New York: Appleton & Co.

This work is intended to be a guide to the practitioner when called upon to make a diagnosis as to the seat and nature of the different forms of paralysis. A work to thoroughly cover such an extensive field, and to represent even the present state of knowledge, must be one compiled by a physician who has labored long and earnestly in this department. This, Dr. Bastian has done. He produces a work which represents a great amount of industry. The work, we are confident, will be a very important aid to those practitioners who desire, in making a diagnosis, to go beyond simply the name "paralysis." Any who consider anything additional of little use will be foolish to buy Dr. Bastian's work. Fortunately, however, the day is past when even patients are satisfied with the simple expression that they are paralyzed. They want to know all about its origin and probable course, and as an aid to the often great difficulties that present themselves to the physician in those cases, we know of no better work than the one under notice. Not only is the general subject of paralysis fully dealt with, but, in addition, we have some very able notices of collateral subjects. We would especially mention that section dealing with aphemia, agraphia, aphasia, and amnesia—subjects that the author has done much to elucidate.

It is impossible, in the space at our disposal, to even indicate the general plan of the work. The subject of cerebral paralysis receives by far the greatest consideration, about three parts of the work being taken up with it. The spinal and peripheral palsies receive a fair share of attention, but we have noticed that the author has not the same acquaintance with the modern literature in this department that he has in the cerebral part.

In a work which is intended to be a thorough guide, more should be said of the value of electricity in determining the causation of the different varieties of paralysis.

A Text-Book of Human Physiology.—By PROF. LANDOIS. Second American translated from the fifth German edition, with additions by PROF. STIRLING. In one volume. 583 illustrations. Philadelphia: P. Blakiston, Son & Co.

This work has gone through several editions in Germany, proving its adaptability to its native soil; and the fact that Professor Stirling's translation of it has so soon passed into a second edition, is evidence of its popularity in its English dress. The second edition appears in one volume, and many will judge this an improvement on the original two. This work is now the largest, most profusely illustrated, and most comprehensive text-book on physiology in the English language. It is specially well adapted to the practitioner of medicine, since it furnishes at once a tolerably complete and at the same time compact statement of what is known in the various departments of physiology. The practitioner will also find accounts of the methods of investigation of the day, accompanied by the necessary graphic illustrations. Anatomy, especially microscopic, is treated in minute detail, another recommendation in a book specially intended for the practitioner.

When Professor Stirling attempted in a work of this kind to notice the most recent researches, even those published in the English language, he essayed a very difficult task, and considerable allowance must be made for individual judgment as to what to insert and what to omit. This task, while fairly well performed, is, perhaps, the least satisfactory. Many researches equally important with those noticed, others tending to modify or to confirm those referred to, have not been mentioned. This certainly applies to not a few recent American investigations. Perhaps this is inevitable, but it is likely that a better balance will be obtained in later editions. We are glad to notice that the comparative element, which is daily growing in importance, has not been overlooked. The attempt to connect the normal and abnormal in a work of this kind will meet with great favor. It

certainly will have the very much to be desired effect of leading the student of clinical medicine to see the bearing of physiology on his professional work. Not a few seem to have forgotten that until our physiology is more extended, and put, in many cases, on a firmer basis, pathology proper and clinical medicine must be much less scientific than they otherwise would be.

If the publication of Stirling's Landois accomplished no other end than that of leading the profession of medicine to see this connection, it would repay manifold the labor spent upon it. We wish the work well.

Analysis of the Urine, with special reference to the Diseases of the Genito-Urinary Organs.— By K. B. HOFMANN, Professor in the University of Gratz, and R. ULTZMANN, Docent in the University of Vienna. Translated by T. BARTON BRUNE, A.M., M.D., Lecturer on Clinical Medicine in the University of Maryland, and H. HOLBROOK CURTIS, Ph.B., M.D., Fellow of the New York Academy of Medicine, &c. Second edition, revised and enlarged. New York: D. Appleton & Co.

For the every-day wants of the practitioner, we know of no manual on urinary analysis that equals Hofmann and Ultzmann's work. The authors are well-known men in their respective departments, Hofmann being Professor of Medical Chemistry in Gratz, while Ultzmann is director of the Polyclinic for Diseases of the Genito-Urinary Organs in Vienna. The second edition contains all the important advances that have been made in the examination of the urinary constituents during the past three years. One of the most important sections of the work is that devoted to an account of the microscopical and clinical aids for the diagnosis of the different forms of albuminuria. The translators are to be congratulated on producing a very clear and readable rendering of the original.

Books and Pamphlets Received.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Austin Flint, M.D., LL.D. Sixth edition, revised and largely rewritten by the author assisted by Wm. H. Welch, M.D. Philadelphia, Lea Bros. & Co.

A TREATISE ON THE PRACTICE OF MEDICINE, for the use of Students and Practitioners of Medicine. By Roberts Bartholow, A.M., M.D., LL.D. Sixth edition, revised and enlarged. New York, D. Appleton & Co.

A LABORATORY GUIDE IN URINALYSIS AND TOXICOLOGY. By R. A. Witthaus, A.M., M.D. New York, Wm. Wood & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 11th, 1886—Concluded.

T. G. RODDICK, M.D., PRESIDENT, IN THE CHAIR.

Successful Ovariectomy in a Pregnant Phthisical Woman.—

DR. GARDNER related the case as follows :

Mrs. A., mother of two children, youngest being 10 years old, has suffered for many years with cough, hæmoptysis, and purulent expectoration, together with the physical signs of phthisis. A tumor was diagnosed five years ago by her family physician. Was seen a year ago last March by Dr. Gardner ; at this time an operation was not recommended, for, besides the patient's general health being bad, the tumor felt as if there were adhesions in the pelvis. Her menses ceased last February, and the symptoms of pregnancy came on. She suffered much from nausea and vomiting, and also orthopnoea. Something had to be done to relieve this last symptom. Dr. Gardner considered his best course was to operate, and not to induce premature labor, as some recommended. Two weeks ago, with Drs. Roddick and Bell assisting, he performed ovariectomy. On opening the abdomen, the dark brownish-red uterus contrasted strongly with the pearly glistening tumor. No adhesions existed, and there was a good pedicle. Convalescence was perfect. The temperature never got above 99°F. There was very little vomiting, and the ether did not affect the lungs. The stitches were removed on the seventh day. Her breathing became easier, and the cough and expectoration lessened.

Three Cases of Cysts of the Broad Ligaments.—DR. GARDNER briefly related three operations he had recently performed for cysts of the broad ligaments. The first case was that of an ordinary cystoma, which he enucleated, a good convalescence following. The second case was one where he intended opening a deep abscess, but, after getting into the abdomen, found a cyst above it ; this he opened, and stitched its walls to the abdominal opening. Through drainage was maintained by tubing through the abdominal opening, cyst, abscess cavity, and out through Douglas's pouch and the vagina. In this case convalescence was slow. The third case was a large sessile cyst, which was incised and stitched to the sides of the abdominal opening, and a glass drainage-tube inserted. Patient did well.

DR. HINGSTON then read a short paper entitled "*Some Remarks on Ovariectomy.*"

Stated Meeting, September 24th, 1886.

J. C. CAMERON, M.D., 1ST VICE-PRESIDENT, IN THE CHAIR.

Case of Congenital Wry-Neck.—DR. LAPHORN SMITH exhibited a case of congenital wry-neck in an unmarried female, 26 years of age. Her father and mother are alive and well, and she is one of a large family, all of whom are alive and (except herself) in good health. Before her birth her mother received a severe fright, to which she attributed the girl's deformity. Ever since her birth, she says, she has been troubled more or less with a spasmodic condition of the right sterno-mastoid muscle. During the last few years the muscles of the face and throat have become involved, and now, even the muscles of the lower extremities are in a state of clonic contraction, which gives her a gait similar to that seen in locomotor ataxia. The patellar reflex is markedly increased. Were it not for this fact, and also for the fact that it was congenital, one might think that the disease was of an hysterical nature;—for it completely disappears when she is asleep, diminishes very much when she is not observed by any one, while when she comes to see the doctor, the spasms of her face and neck become so severe that her features are frightfully distorted and she appears to be in imminent danger of suffocation; and, indeed, feels as if she could not get another breath. The muscles of the tongue are also affected, rendering her speech stammering. The muscles at the back of the neck, opposite to the affected side, have become enormously hypertrophied in their efforts to oppose the contractions of the sterno-mastoid. With regard to the prognosis, Dr. Smith said it was not favorable in these cases, operative interference being contra-indicated; for as soon as the sterno-mastoid is cut, the disease invades some other muscle. The treatment, therefore, is nearly entirely medical. This patient has greatly improved under 20-grain doses three times a day of the mixed bromides of ammonium, sodium and potassium; but nearly the whole list of narcotics have been recommended, such as chloral, chloroform, ether, morphia and atropine; also tonics, such as iron, strychnine and arsenic. He was alternating the bromides with iron and strychnine in this case, bromism having shown itself. Dr. Hammond reports two cures with bromide of zinc, on which he mainly depends, electricity having failed in every case in which it was tried.

Ulcerative Endocarditis.—DR. SUTHERLAND exhibited the heart and a portion of the right lung from a case of ulcerative endocarditis. Patient, a man aged 35, came to the out-door

department of the hospital complaining of being out of sorts, and said that three months ago he had been on a spree, and had slept on a bench in Central Park and there caught cold. At the hospital he was found to be slightly feverish, and was persuaded to go to bed. While the nurse was getting a bath ready he fell back and died immediately. On the endocardium of the left ventricle was a cauliflower excrescence one inch long and projecting about a quarter of an inch. There was also a similar, but older, looking excrescence on one of the aortic valves. Throughout the lungs were several small ulcerating cavities.

Ovariectomy; large Tumor.—DR. TRENHOLME exhibited an ovarian sac, removed from a lady at Levis on the 31st August. The sac and contents weighed over 70 lbs. This is the fourth operation since the last Society meeting; all the three previous patients made a good recovery. There were excessively firm adhesions of the sac to the abdominal parietes, intestines, diaphragm and liver, so strongly adherent that the sac had to be peeled off by reaching the posterior part and then working it off toward the front. The sac was also very friable, and in great part had to be removed piece by piece. This multilocular tumor had been repeatedly tapped, and was a good illustration of the bad effects of such treatment. The patient, though very feeble and exhausted, bore the operation well, and when Dr. T. left her, thirty hours after the operation, her pulse and temperature were almost normal, and she was feeling well and cheerful. There was very little tympanitis, but on the fifth day vomiting set in, and inability to take nourishment. Though the vomiting was not severe, the patient gradually failed, and died on the eighth day.

DR. C. A. WOOD then read the following paper on a

CASE OF CEREBRAL SURGERY.

I have made the presentation of a case of brain wound occurring in my practice the excuse for saying something to you about those recent advances in cerebral surgery that have excited so much interest both in this country and abroad. For example, it was generally admitted that Prof. Victor Horsley's paper on this subject, to which I shall refer later on, was the most valuable contribution made to the surgical section of the British Medical Association during its late meeting in Brighton, and we have also daily evidence of the increasing interest in the surgery of the brain from the continual reference to it in our periodical medical literature. Of course I need hardly say that those with

hospital and other extensive opportunities are most competent to give opinions of value in this department of surgery, and I trust my paper will at least be the means of eliciting expressions of opinion from gentlemen present who have the best right to speak. For the notes of the case I am indebted to my friend Dr. Hutchison, who had charge of the patient during my absence from the city, and who saw him almost daily during the entire illness :

R. R., aged 4 years and 2 months, was running along the street with a pea-shooter about 18 inches long and $\frac{3}{8}$ inch in diameter. He fell, and struck his head against the end of the tube held upright in his hand. The hollow cylinder passed through the left lower eyelid and entered the orbit about a quarter of an inch from the margin, inflicting an injury to the brain itself. The tube entered $2\frac{3}{4}$ inches, and was with difficulty withdrawn by a neighbor, who, we afterwards learned, noticed upon the end of it some putty-like substance, mixed with blood. The accident occurred on the 10th May, about 10 o'clock, and he was first seen a few minutes afterwards. Child unconscious; extensive contusion of tissues surrounding wound; left pupil dilated, with no response to light. Right pupil is normal, and responds to light. Pulse very weak and slow, and vomiting almost constant. Respiration slow and labored. Dr. Wood took charge of patient at 10.30 A.M. There was then no response to light in either eyes, the left pupil dilated and immovable, child pale and restless, and the vomiting had ceased. There is slight proptosis. There was complete motor and probably sensory paralysis of right side, and convulsive movements of upper and lower limb, these movements being chiefly marked in right arm. The convulsions continued all day, and for a short time before they ceased there was simply spasm of right arm. At 9 P.M., right eye responsive to light; no convulsions; no return to consciousness; temperature 100°F .

May 13th.—Patient has remained in about the same condition since last note, but now shows signs of returning consciousness. Takes food with some difficulty, and when asked will protrude tongue, whose deviation to right side is marked. Bowels moved by enemata.

May 16th.—Eyes examined by Dr. Proudfoot. There is a slight serous and bloody discharge from the wound; the conjunctiva is much inflamed, and protrudes over the margin of the partially everted lid; the soft parts about the eye are greatly swollen and discolored. The apparent protrusion of the eyeball about the same as day of injury. Morning temperature $101\frac{1}{2}^{\circ}\text{F}$.

The inflamed conjunctiva was incised, and the wound kept open by cotton drain. A week after the accident, there is a slight return to consciousness; pulse 150, temperature $101\frac{1}{2}^{\circ}\text{F}$.

May 18th.—Temperature, 9 A.M., 103°F ., pulse 150. There is no discharge from the wound. No vision in right eye. Child partially comatose. Requested permission to have wound opened for purpose of drainage, but it was refused. Child's condition worse.

May 19th.—Morning temperature 103° ; evening 104° . Restless, head extended and drawn to right side, the muscular spasm being so great as to prevent its being drawn forward.

May 20th.—Temperature at noon 105° . Ordered 5 grs. quinine. Patient unconscious.

May 21st.—Dr. Proudfoot again saw the patient; made an incision over site of wound, introduced drain, and applied poultice. On the 22nd, there was a slight discharge of sero-pus from the wound, temperature fell to 103 , and child became more conscious.

May 24th.—The discharge continues, but the temperature is 104° , and child's condition unimproved. This state of things continued until the 29th, when the child died comatose. To the great regret of Dr. H., he was unable to obtain a post-mortem.

There seems to me to be little doubt, however, that the track of the wound, after piercing the left lower lid, extended from a point midway between the outer and inner angles across the floor of the orbit, injured and possibly destroyed the optic nerves, caused protrusion of the ball, passed through the roof of the orbit close to the sphenoidal fissure, and entered the brain at a point in the frontal lobe, at its base, close to the fissure of Sylvius. With the exception of the monobrachial spasm, one could hardly further localize the injury. To suppose that the point of entry was through the sphenoidal foramen would be to admit injuries to the middle cerebral arteries and other structures at the base of the brain, inconsistent with the course which the injurious effects subsequently pursued. As Gowers points out, violence to the cerebral substance in the region of a motor centre will produce symptoms which are usually referable to lesions of the centres themselves. That the child died of septic meningitis appears to me to be also probable.

The question that naturally arises in a serious brain wound

of this sort is, "Will any operative procedure be of use?" When Dr. Proudfoot first saw the case with me I urged the propriety of treating this injury as I would have done any other deep puncture. Here we had a penetrating wound of the orbit involving the brain, and my idea was to remove the useless eyeball and to attempt to set up at once direct drainage from the deeper parts of the wound, after it had been thoroughly cleansed and injected with a fairly strong antiseptic solution. I would then have dressed it after the strictest antiseptic style and waited results. The parents, however, refused to permit this, and Dr. Proudfoot was not, I think, very enthusiastically in favor of the scheme. And yet, while I am not given to talk about what might have been, I am now, knowing the results which followed the wound, perfectly satisfied that such a course would, under the circumstances, not only have been justifiable, but that in the light of recent knowledge have been the proper course to pursue. As in other situations, the dangers of deeply penetrating wounds are sepsis and inflammation. Here we had a case where the patient lived nearly three weeks after the injury, so that death was not caused by the first and direct shock, but probably by the train of evils brought on by septic material conveyed into the brain and along the whole track of the wound, causing inflammation of the meninges and possibly of the nervous matter itself. Septic absorption soon took place, the products of the inflammatory process were unable to find vent, and further absorption occurring, death was of course inevitable. That the plan of ample and direct drainage, with antiseptic dressings, in brain injuries is crowned with success in apparently hopeless cases, and that recovery would not otherwise have taken place, seems to me to have been amply illustrated in recent years. This disregard of the *noli me tangere* rule which has so long obtained with most of the internal organs is now affecting the chief nervous centres, and no one can place limits upon the extent to which it may yet be carried.

As the subject is one of great interest to me, I should like to make a part of this paper the test for remarks which will bring out a discussion of these recent advances in cerebral surgery, and if you will permit me, I will say something about them.

Of course, as everybody knows, bold and successful deeds in brain surgery were not unknown to the older surgeons, but they were, when they occurred, classical exceptions to the rule that such treatment of the cerebral structures was in the nature of things fatal. From the time when Dupuytren plunged his knife into the brain and opened a cerebral abscess, giving relief to the symptoms and leading to the ultimate recovery of the patient, many surgeons have successfully imitated him. So, too, do we find many cases of severe brain lesions doing well under the older surgeons; but there are just two factors in these cases which make the chief differences between the older procedures and the surgery of the present day—1st, more accurate diagnosis, and, 2ndly, antisepticism. A better definition of the situation, extent and character of a cerebral wound, abscess, tumor (whatever it may be), is possible in our time, chiefly because of the works of men like Prevost, Brown-Sequard, Hughlings-Jackson, Gowers and others.

All observers agree as to the special value of the antiseptic method in dealing with lesions of the brain. Packard says that wounds of the brain heal readily when secondary inflammation does not set in, and in speaking of their treatment, places great stress upon the employment of antiseptic dressings. Hughes-Bennett's celebrated case of brain tumor reported in the *British Medical Journal* for May, 1885, would have done better, said the operator, Mr. Rickman Godlee, if stricter antiseptic measures had been preserved. In a very clearly written article upon trephining (see *Annals of Anatomy and Surgery*, No. 3, Vol. VIII), Dr. H. B. Sands thus insists upon the special value of antisepticism when the brain is involved: "Aside from those cases," says he, "in which the brain has suffered irreparable damage, I think that in future many successes will be obtained by careful antiseptic treatment of the wound, such as recommended by Lister in the management of compound fracture of the bones of the extremities. The most scrupulous cleansing of the wound, the arrest of hemorrhage, the removal of foreign bodies, loose fragments of bone, and of detached portions of brain matter, if present, followed by proper drainage and dressings, is, in my judgment, the only means which, with our present

knowledge, promises any benefit in this nearly desperate class of cases."

After one has borne in mind that trephining is now commonly resorted to for the opening of cerebral abscesses, for epilepsy—of the Jacksonian variety usually—where a traumatic cause can be assigned, that it was proposed by Gross in 1873, and I think has been resorted to since then for the relief of purulent meningitis, there remains another modern occasion for its performance which I shall close by speaking of. The attempt to remove a cerebral tumor by cutting down upon it after trephining was first made in November, 1885. From the article on brain tumors in Pepper's System, written by C. K. Miles and Hendrie Lloyd (the most concise treatise on the subject that I know of), a short account is given of this remarkable case, which may be taken as a type of hundreds of others known to medical readers. "Four years previous to death patient received a blow on left side of the head. A year later, twitching in tongue and left side of face. Later, twitching of left arm. Twitching increased, paroxysmal spasm, and general convulsions, with loss of consciousness. Paresis, and then slowly-developed paralysis of the forearm and arm. Some paresis of left leg. Double optic neuritis and violent headache." This patient was under the care of Hughes-Bennett at the London Hospital for Epilepsy and Paralysis. He diagnosticated brain tumor, and suggested its removal. Rickman Godlee trephined over suspected region, and removed a glioma the size of a walnut. The patient did well until a month after, when *hernia cerebri* supervened, and he died.

Mr. Victor Horsley, the Prof. Supt. of Brown Institute, in his paper, told how the brain was searched in a similar way in three instances, all of which recovered with distinct relief from the symptoms. The patients, who had epileptic attacks of varying degrees of intensity and frequency, were, in consequence of them, absolutely unable to do any kind of work, and their lives were made miserable.

The chief points of interest lay in the attempt to simulate the symptoms in monkeys by irritation of their motor centres. The epileptic seizures, the muscular spasms, the convulsions, the

paresis,—all were successfully imitated by vivisection so as to demonstrate, by a plan not likely to be called in question, the exact situation of the human cerebral lesion. The wound in the scalp was made by a semi-circular sweep of the knife, as opposed to the crucial incision usually made, Mr. Horsley thinking that healing took place more quickly afterwards, and better drainage was in this way obtained. He laid considerable stress on the advisability of cutting through the brain structures parallel to the direction of the sulci, and said that hemorrhage was best arrested by filling the wound with a soft antiseptic sponge. To secure success, it was advisable to adhere strictly to the antiseptic plan throughout. The patients were exhibited, and in every case the motor and sensory disturbances were either entirely cured or so relieved that they were able to live comfortably and to do work. As Dr. Broadbent remarked in his address before the medical section of the British Medical Association, medicine and surgery are brought into specially close relations in these matters of cerebral tumors and lesions, which are medical as regards diagnosis, but surgical as far as effective treatment is concerned. So far as we yet know, brain tumors and other irritants of the cerebral centres, to be capable of sufficiently accurate diagnosis as to permit of their removal with success, must be situated in the motor zone; they must not be too large, must be single, must not be too deep-seated, and must not be malignant. This may narrow the field down to a small array of cases, but in the meantime, while a more extended study of the cerebral functions will probably make diagnosis more easy and certain, it is something to have made worth living even a few lives otherwise doomed to hopeless misery. It may fairly be claimed, also, that the chief bugbears of the surgeon are secondary inflammation and sepsis—insurmountable obstacles they would be even if we could localize cerebral tumors with the most positive accuracy; these are now guarded against as we guard against them in other departments of surgery, by following the common-sense rules of the antiseptic system.

DR. SHEPHERD said that McEwen of Glasgow had implanted again the piece of bone removed by the trephine, previously breaking it into fragments, a good recovery following. Dr.

Shepherd mentioned a case under his care in the hospital where a man had been kicked by a horse, fracturing the bones of the skull in such a manner that one piece was overriding another ; no symptoms following, he sewed up the external wound, a slight pad and bandage being placed over all. In about ten minutes the man had an epileptiform convulsion ; pressure being removed, he got well and recovered completely. Another case, a man had his frontal bone crushed in from a fall of 40 feet. He remained insensible for a few days, but got perfectly well. The wound was cleansed with solution of bichloride of mercury and iodoform gauze applied.

The CHAIRMAN said that Horsley laid great stress upon removing brain substance where it appeared to be affected, particularly in removing brain tumors.

Aneurisms of the Aorta.—DR. KENNEDY said he had been recently asked to be present at a post-mortem examination of a man who died suddenly. The skin was yellow. There was fatty degeneration of the liver. The right lung was collapsed, and that side of the chest filled with blood from the bursting of a large aneurism of the descending aorta. A second aneurism also existed of the abdominal aorta. Dr. Kennedy understood that aneurism had never been diagnosed during life.

DR. GEO. ROSS said that nearly eighteen months ago he had treated this man for aneurism, and with relief to the symptoms. He gave him iodide of potassium, with rest. When first seen, the man complained of rheumatism of left shoulder-blade ; the pain was severe and neuralgic. He made out no bruit from the aneurisms, but downward a double, soft basic murmur. When last seen by Dr. Ross (last spring), the man was taking morphia for the relief of the intense backache.

A case of true Scurvy ; death, with obscure brain symptoms ; a large blood-clot found in the right temporo-sphenoidal lobe.—DR. R. L. MACDONNELL related the case as follows: W. P., a farm-laborer from the Eastern Townships, was admitted to the Montreal General Hospital Sept. 18th, 1886, complaining of general debility and the presence of an eruption on his face and the upper part of his body. Two years ago he had rheumatism, and for several years has had a slight cough. For the last 12 months his diet has consisted exclusively of bread and butter,

milk, tea, sugar, no vegetables except potatoes, and no meat whatever, either fresh or salt. About the 15th of July last he began to feel weak, drowsy and indisposed for work. A slight cough was present, with blood-stained expectoration and frequent epistaxis. The gums then became soft, tender, and prone to bleed easily; some slight ulceration being also present. Spots and patches of "black-and-blue"-like bruises appeared first upon the legs, subsequently over the whole body, more especially on the chest, where the largest patch was about three inches in diameter, the smallest the size of a pin's head. At this time his general strength was fair and his appetite good. There had been but one syncopal attack, and that occurred the day after his admission to hospital. *Present condition*—Emaciation considerable; his usual weight being 160 lbs., he weighs at present but 133 lbs. Skin dull and pasty; eyes sunken; mucous membranes anæmic. In the mouth, more especially upon the palate, there are several petechial extravasations under the mucous membranes. The gums are pale, spongy, receding, and ulcerated at the edges. Over the body generally there are numerous small purplish patches, but no large bruise-like surfaces as were formerly said to exist. Examination of lungs negative. There was a well-marked systolic murmur heard with maximum intensity at apex, also at base, and for a short distance towards the left axilla. The urine was pale in color, with little or no deposit on standing; no albumen, no sugar. The blood cells number $2\frac{1}{2}$ millions to the cubic millimetre. *Treatment*—The patient was kept in bed and placed upon the full hospital diet, with extra vegetables, lemons and other fresh fruit. An iron and quinine mixture was ordered. *Sept. 22*—Patient fainted this morning, and afterwards had a slight chill. Severe frontal headache set in, accompanied by obstinate vomiting. At mid-day the pulse was 66, and weak; extremities cold; rather stupid, but not comatose; no paresis perceptible. Ordered hot bottles and a stimulant. For the rest of the day the condition did not improve, and at 2.30 A.M. on the following day died without showing any evidence of unilateral disease. *Post-mortem appearances*—Large hemorrhage into the right cerebral hemisphere, under the lateral ventricle. Hemorrhagic infarcts in both lungs, especially the right. Sub-pericardial hemorrhages, especially over the left ventricle. A few subcutaneous hemorrhages. Body well nourished, warm, rigor mortis commencing; a number of commencing petechiæ and vibices chiefly on the front of the chest, belly and legs. There was nothing abnormal found in the abdominal cavity beyond that the bladder was very much distended. *Thorax*—Heart: Left chambers empty and contracted;

the right full and dilated. The natural heart muscle can hardly be seen owing to the many extensive hemorrhages under the pericardium. Lungs: The right shows many infarcts, which appear recent, the largest, at the base of the lung, measures $1\frac{3}{4}$ inches. The whole posterior part of the lung is œdematous and passively congested. The left is in a similar condition, but there are fewer infarcts. No subpleural effusions, and very little serous fluid in the pleuræ and pericardium. The aorta in no place blood-stained. Brain: In removal, the saw opened a cavity in the right hemisphere, whence blood and broken down brain matter, in no way altered or decomposed, made its escape. There were no subdural or subpial hemorrhages, and a careful dissection showed that the ventricles, though full of blood and serum, were normal; but under the right lateral ventricle there is a large cavity, with ragged walls, occupying the whole of the right temporo-sphenoidal lobe, extending forward into the frontal and back into the occipital lobe; the lower part of right hemisphere is reduced to a mere shell; the upper part above the ventricle intact. All parts of the brain are unusually vascular.

DR. R. J. B. HOWARD exhibited the heart, right lung, and brain, and described the post-mortem appearances.

DR. GURD asked if this could not be a case of simple purpura hemorrhagica.

DR. SMITH said it was unusual to see scurvy in a person living upon the diet said to have been used by this patient. Sailing vessels were not bound by law to carry lime-juice if they had potatoes.

DR. R. L. MACDONNELL thought the whole history of the case pointed to its being scurvy, and DR. HOWARD said that the post-mortem examination gave evidences of this disease.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

(From our own Correspondent.)

On the invitation of the Ontario delegates sent last year to Washington, the American Public Health Association held its annual meeting at Toronto on the 4th ult., while at the same time the annual conference of the State Boards of Health took place. The Association held its meetings in Shaftesbury Hall, a roomy building, well provided with lecture halls, reading-rooms, and, in fact, everything necessary for the requirements of a

meeting of this nature. The States of the Union were all represented, as well as the U S. army and navy, at the conference of the Health Boards, the Province of Ontario, as well as Quebec and New Brunswick, counting each as a State. There being no Health Board in Quebec, Dr. Montizambert, of the quarantine service, represented his Province.

It is a remarkable fact, and one highly discreditable to the government now seeking a return to office, as well as to the people of the province, who have it in their power to make the government do their bidding, that Quebec, which, during the past year, had the largest death-roll from preventable disease ever seen in modern times, should have, at this very critical time, no Board of Health whatever, the Conservative government having thought fit to allow the Central Board of Health to be dissolved at the expiration of its term of office on the 4th of September last.

The meeting was opened by the new president, Dr. Walcott, of Cambridge, Mass., the first subject discussed being the destruction of night-soil and garbage by cremation, a matter interesting to us here, for it was stated that the plan was already carried into practice, and that successfully, in Montreal.

The Toronto trunk sewer scheme, introduced in a paper by Mr. Allan MacDougall, C.E., occupied a great deal of the time of the meeting, and met with thorough discussion.

At the Committee on State Boards of Health, an important report was presented on "Interstate Notification on the Outbreak of Smallpox, Cholera and Yellow Fever," and it was in the discussion of this report that a statement was made to the effect that the State Board of Health of New Hampshire, not having been notified of the outbreak of smallpox in Montreal, was obliged to proceed there to obtain necessary information for itself. This charge was met by a contradiction from Dr. Rodger of Montreal, supported by the representative of New Hampshire. The State Board had been warned, not by the Central Board of the Province of Quebec, because it was not in existence at the time, but by the transportation companies, and it was at their invitation that the State Boards came to Montreal and made their inspection.

Among the more important papers were those of Dr. D. Prince, of Jacksonville, Illinois, "An Experimental Study in relation to the removal from the Air of the Dust or Particulate Material supposed to produce Yellow Fever, Smallpox, and other infectious diseases"; of Dr. G. B. Thornton, on "Six Years of Sanitary Work in Memphis," and a highly instructive address by Dr. Russell, Health Officer of Glasgow, on the sanitary condition of that city.

At the close of the meeting, a resolution was adopted that it is "the opinion of the Association that an examination as to protection by vaccination of all passengers arriving from Europe, cabin passengers as well as others, should be enacted at all ports and in all cases, even if no cases of smallpox have occurred on the passage." A resolution was also adopted "that all rags regarded as suspicious and capable of having infection should be disinfected before being allowed to enter the country, and that in the present state of knowledge as to the possibility of thorough disinfection it might be sufficient to disinfect the exterior of bales at the quarantine station and to complete the disinfection at the manufactories."

Socially, the meeting was most successfully carried out. The ladies of Toronto gave two receptions—one at the Yacht Club and the other at the Rossin House.

The president's address, an exhaustive review of the progress of sanitary science, was delivered, together with those of the president of University College and others, at a *conversazione* held in the Normal School.

Hospitalities of all kinds were in various directions extended to the visiting members, so that the meeting of the Association in Toronto cannot fail to be regarded as eminently successful.

Dr. Sternberg, of the U. S. army, was elected president for the coming year.

CANADA

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PLAGIARISM EXTRAORDINARY.

It is not often that we have to speak disparagingly of the introductory lectures delivered at the opening of the session of the medical schools, but this year we feel compelled, for the sake of common justice, to expose a case of the most barefaced plagiarism, in the form of an introductory lecture, that it has ever been our misfortune to meet with. This lecture was lately delivered at the opening of one of the largest medical schools in Ontario, and is published (in full) in the *Mail* of October 2nd, 1886. On reading over the lecture, it struck us as somewhat familiar, and on examination we found that the whole lecture was "cribbed" bodily from Holden's *Osteology* and Sir Charles Bell's *Bridgewater Treatise on "The Hand."* The lecturer rings the changes on these two books, and whole pages are extracted verbatim, the personal pronoun "I" being, of course, left out. The only original portions of the lecture are occasional sentences, suitable for missionary meetings, and interpolated at proper places, which speak of the beauty and perfection of design in the work of creation, in, for instance, supplying blood to the several parts of a long bone, or the wisdom and goodness of an All-wise Providence in adapting the various bony structures of men and animals to the duties they have to perform, etc.

We have always been of the opinion that introductory lectures should endeavor to give the student some information and advice concerning the course of study he is about to enter on, and this new departure in introductory lectures is not to be commended. It is bad enough to steal the product of other men's brains and pass them off as one's own, but it is a great mistake to publish

the fact abroad. We trust that the learned gentleman who delivered this lecture will, in future, take his material from less known works, and such as are not commonly used as text-books.

ON THE NATURE OF THE GLOMERULAR ACTIVITY IN THE KIDNEY.

Two widely differing views on the above subject have been maintained by schools of physiology headed by Ludwig on the one hand, and by Bowman, Heidenhain and Nussbaum on the other. Ludwig held that the glomerular activity was almost, if not quite, purely mechanical—a filtration process.

Bowman was the first to point out that there was a double renal vascular supply in fishes, batrachians and ophidians. 1st, From the renal artery to the glomeruli. 2nd, From the renal portal vein and the lumbar veins, which communicate with the *vasa efferantia* from the glomeruli, and assist in forming the capillary network around the tubuli uriniferi.

Nussbaum, availing himself of these facts, attempted to determine by ligature of the renal arteries the course certain substances take in being eliminated by the kidneys. His brilliant work held sway up to a very few months ago, when the correctness of his conclusions was put to the test by J. G. Adami. The latter has detailed the results of his work in a lengthy paper published some months ago. The research was carried out in the laboratory of Heidenhain, the most acute, perhaps, of living German physiologists.

Adami's experiments were performed on both frogs and dogs; and great as were the difficulties of operating so as to maintain a normal condition of the kidneys and of the animal generally, the author thinks this was accomplished. He first repeated Nussbaum's celebrated ligature experiments, and concluded that the anatomical basis of this physiologist's work was unsound. In opposition to Nussbaum, he finds that after ligature of the renal arteries in frogs the glomeruli are not completely cut off from the circulation. It would appear that after a few hours vascular connection between the capillaries around the tubuli and the afferent vessels of the glomeruli are opened up. It follows that Nussbaum's conclusions as to glomerular activity

have no longer the basis their author claimed for them. Adami found that after ligation of the renal arteries in frogs, secretion of urine, though at first arrested, was re-established, and in a few days became all but normal. He concludes, then, that the secretion is not dependent on the blood pressure, as Ludwig maintained, but upon the *rate of the vascular flow*.

Again, after ligation of the renal arteries, hæmaglobinuria phenomena appeared after the injection of "laky" (hæmaglobin dissolved out of the corpuscles) blood; that is to say, with a greatly lowered blood pressure, and without a corresponding watery secretion. Microscopical examination showed, after the kidney had been boiled, blood menisci in the capsular chambers of the glomeruli. From this it is concluded, as was previously maintained by Heidenhain, that the *glomerular epithelium possesses a definite secretory activity*.

There must have been, in this case, blood-flow through the glomerular vascular knot. The experiments were repeated on dogs, and "in all the cases microscopic examination revealed indubitable hæmaglobinuria menisci lying in the capsule chambers of the glomeruli." The evidence in favor of the secretion of albumen by the kidney after injection was conclusive; but while there was some ground for believing that it is eliminated by the glomeruli, this was not ascertained beyond a doubt. After the injection of urea into the blood, the channels of the collateral circulation are expanded, and the glomerular epithelium is excited to increased secretion of water. It must be independent of blood-pressure, for the renal arteries were in this case also ligated. The general result of Adami's entire research is to shake the mechanical theory of glomerular activity thoroughly, and establish firmer than ever the doctrine that the *epithelium of the glomeruli possesses definite secretory or selective functions*.

POST-FEBRILE NEURITIS.

One of the most important advances made during the past year in neurology is the recognition of the great frequency of neuritis. It is now known that many forms of paralysis and disorders of sensation commonly attributed to cerebral and spinal

changes are really due to inflammation of the peripheral nerves. It is only within a very recent period that alcoholic neuritis has been determined to be a distinct disease. Still later, we have proof that many cases of paralysis following the infectious fevers are really due to a peripheral neuritis. Of all the acute febrile diseases, diphtheria is the most frequently followed by these changes. So profound are they in the peripheral nerves after this disease at times that recovery is hopeless. The vast majority of cases, however, recover completely.

The paralysis which is occasionally seen following typhoid fever has been almost universally attributed to a subacute poliomyelitis, but from the recent researches of Pitres and Vaillard, it is plain that it is more frequently due to a peripheral neuritis. In several cases they found marked degenerative changes in the ulnar, musculo-spiral, peritoneal, saphenis and other nerves. These changes closely resemble those found in the nerves in cases of fatal diphtheritic paralysis. Not only is peripheral neuritis a frequent effect of the acute infectious diseases, but it is also seen in those of the chronic infectious class. The same observers have found degenerative changes during the course of chronic tuberculosis in the peripheral nerves.

THE "NATURFORSCHER VERSAMMLUNG."

At the fifty-ninth meeting of the "Versammlung Deutscher Naturforscher und Aerzte," recently held in Berlin, the number of members reached the enormous figure of 4,155, besides 1,496 ladies, making the largest meeting the association has yet known. The opinion prevails, however, that, having now reached the limit of its usefulness, it will begin to decline. The too large attendance prevents really efficient section work, although the number of sections has now been raised to thirty. The highest scientific work and the more important scientific discoveries are usually communicated to the specialized societies, and the "Naturforscher" is now practically a great pic-nic having a scientific flavor. It must be said, however, that the societies which have thus to some extent supplanted it have, without exception, been formed through its direct influence, and with a view to increasing the effectiveness of the sections in which they originated.

Prof. Virchow, as president, in an address delivered in the Circus Renz before an audience of 5,000, while alluding to the above facts, laid great stress upon the mutual advantages derived from the combination of the medical with the purely scientific element. A striking feature is the extreme simplicity of the executive, Virchow and Hofmann as president and vice-president making all the minor appointments, and, with the assistance of a further committee, having practically absolute control of the association's affairs. In the sections, any member who has specially distinguished himself during the day's proceedings is usually appointed chairman for the following day. A paper, the *Tageblatt*, published daily during the meeting, contains a systematic report of all papers read the day previous, making in all an issue of 440 folio pages.

The chief interest, however, was in connection with the entertainments provided for members. Besides receptions, excursions, yacht races, concerts and a ball, there was the annual dinner, to which 2,500 sat down in the Central Hotel; while the climax was reached when the city of Berlin entertained 7,000 persons at supper, down whose 7,000 scientific œsophagi glided the contents of over 27,000 wine-bottles bearing as labels "Lachrymæ Virchow" and "Hofmann's Tropfen"! Besides these more formal gatherings, each section had its own *kneipe* where every evening the members met to chat and drink the necessary beer and visitors received a hearty welcome. While, individually, the members took a keen interest in the prospects for the coming International Medical Congress, no notice was taken of it officially.

The next meeting will be held at Wiesbaden, with Professor Fresenius as president.

AMENDMENTS TO THE MEDICAL ACT.

The following is the text of the amendments to the Medical Act which were adopted by the Provincial Medical Board at its last semi-annual meeting:—

1. CENTRAL BOARD OF EXAMINERS.—The Board shall be known under the name of the Central Board of Examiners, and shall be composed of two examiners on each subject. The examination shall be conducted in the language of the candidate, provided that the two examiners have the right to examine alternately. If the examiners disagree, the examination on this subject shall be referred to the whole Board.

2. The Central Board of Examiners shall be composed of two representatives from each of the schools of medicine and an equal number of physicians not attached to any of these schools—in all, 20 examiners.

3. The members of the Central Board of Examiners shall be named annually by the Provincial Medical Board, the names of such examiners having been submitted by a committee, to be called the nominating committee, which shall be appointed by the President, subject always to the approval of the Provincial Board, and shall be composed of two representatives from each of the schools of medicine and of an equal number of members of the College not connected with such schools. In case of a vacancy in the Central Board of Examiners by death, absence from the Province, or otherwise, a substitute shall be named by the President.

4. The members of the Central Examining Board may or may not be chosen from amongst the members of the Provincial Medical Board.

5. The Central Board of Examiners shall commence the examinations upon the second Tuesday of April, and shall sit alternately at Quebec and Montreal.

6. The remuneration of the members of the Central Board of Examiners shall be ten dollars per diem, and travelling expenses at the rate of five cents per mile.

7. The professional examinations shall be divided into primary and final; the examinations shall be written and oral. The subjects entering into each of these examinations to be fixed by the Provincial Board.

8. The fees for the examinations shall be as follows: For the Primary Examination, \$15.00. For the Final Examination, \$10.00. For the Diploma, \$25.00.

9. PRELIMINARY EXAMINATION.—The preliminary Examination shall be held once annually on the first Wednesday in July, alternately at Quebec and Montreal. A supplementary examination shall be held during the last week of September for those who have failed in certain subjects, and candidates for this examination will be required to pay a further fee of \$10.00.

10. Graduates in Arts from any of the Universities in Her Majesty's dominions shall not be exempt from passing the preliminary examination. The preliminary examination shall include the subjects which are now compulsory, and, in addition, physics, elementary chemistry, and intellectual and moral philosophy; there shall no longer be any optional subjects. The preliminary examination will be held on the first Wednesday in July in each year, alternately at Quebec and Montreal. The textbooks on intellectual and moral philosophy shall be those made use of in the English and French colleges respectively.

11. The Board of Governors shall meet annually, on the second Wednesday in May, at Quebec and Montreal alternately.

12. ELECTION OF GOVERNORS.—The affairs of the College shall be managed by a Board of forty members, elected for three years in the following manner: Two members each for the Universities of Laval (Quebec), Laval (Montreal), McGill, Bishop's and Victoria; four elected by the members resident in the city of Montreal, and four by those in the city of Quebec; one elected by the members residing in each of the following districts, viz., Montreal, Quebec, Gaspé, Saguenay and Chicoutimi, Rimouski, Montmagny, Beauce, Kamouraska, Terrebonne, Joliette, Bedford, Richelieu, St. Hyacinthe, Iberville, Beauharnois, Ottawa, and Arthabaska; two from the district of Three Rivers, and three from the district of St. Francis.

13. Two months before the election the Registrar shall furnish the Secretary for Québec with a list of all those qualified to vote in the city and district of Québec, the districts of Gaspé, Saguenay and Chicoutimi, Rimouski, Montmagny, Beauce, Kamouraska, Three Rivers, and Arthabaska; and to the Secretary for Montreal, a list of the qualified voters in the city and district of Montreal, the districts of Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois, Ottawa and St. Francis. One month before the election, he shall send printed ballot papers, which shall be signed by the voter and returned in a sealed envelope within the two weeks following to the Secretary, whose signature shall be found upon the ballot paper. The Secretary, upon receipt of such ballots, shall place them unopened in a ballot-box, which, locked, shall remain in the hands of the Secretary, to be opened only in the presence of scrutineers named for the purpose, who shall count the ballots and announce the names of those who have received the largest number of votes.

14. A printed list giving the result of the ballot shall be immediately posted to each voter. The election of Governors shall be held on the first Wednesday in September. The first meeting of the Board for the election of officers shall take place on the third Wednesday in September. The annual contribution shall be payable in advance, and every member of the College must have paid such annual contribution on or before the 1st May in order to have a vote and to be eligible for election. The scrutineers shall be named by the President at the meeting of the Board directly preceding the date of the election.

15. The amendments concerning the Preliminary Examination and the Central Board of Examiners will come into force on the 1st Jan., 1887.

16. Students of medicine shall be obliged to follow regularly courses of study during four academic years.

17. The subject of Botany is removed from the curriculum.

18. Any person duly registered in the medical register of Great Britain and having, consequently, the right to practice medicine, surgery and obstetrics in the United Kingdom of Great Britain and Ireland, shall have the right to registration in the Province of Quebec upon production of a certificate of registration as above; provided always that the same privilege be accorded to the members of this College. The Provincial Board shall also have the right to grant its license to the bearer of a diploma from the University of Paris, and who is duly qualified to practice in France. As soon as a Central Board of Examiners similar to that created under this Act, or a body duly recognized by the Legislature of one of the Provinces of the Dominion of Canada other than that of Quebec, as being the sole examining body for the granting of licenses, and under whom the curriculum is equal to that in the Province of Quebec, then the bearer of such diploma shall, due proof having been made, be entitled to register in the Province of Quebec, if the same privilege be accorded by such Board of Examiners to the licentiates of the Province of Quebec.

19. The new amendments should contain clauses of an explicit nature giving the Board similar disciplinary powers to those already possessed by the Bar and by the Board of Notaries. The clauses of the Act concerning quacks and irregular practitioners to be amended so as to become as effective as possible.

20. In clause 15 of the Medical Act, the word "gynæcology" to be added after the word "midwifery"; and in the same clause, after the words "medical jurisprudence," add the words "of sixty lectures."

CONGRESS OF SPECIAL ASSOCIATIONS.

A meeting of representatives from all the special associations in the United States was held at Washington on the 24th September last, when the project of holding a conjoint congress at stated intervals was fully discussed. The following resolutions were adopted:—

1. That it is desirable that the following Societies—

The American Surgical Association,
 The American Ophthalmological Association,
 The American Otological Association,
 The American Neurological Association,
 The American Laryngological Association,
 The American Gynæcological Association,
 The American Dermatological Association,
 The American Climatological Association, and
 The Association of American Physicians and Pathologists,

shall arrange for a conjoint meeting in the city of Washington, in the month of September, 1888, and subsequently at intervals of three years at the same time and place.

2. That this arrangement shall not interfere in any way with the autonomy of each special Society; and that each Society shall retain the right to withdraw at any time from this conjoint scheme.

3. That the special feature of the meeting shall be the conjoint assemblage of the special Societies on two evenings during the session; on one of which there shall be an address delivered by the president of the conjoint meeting, and on the other there shall be communications by a referee and a co-referee on some subject of general professional interest.

4. That each special Society approving this report is invited to appoint one representative (with an alternate), and that the representative so appointed shall constitute an Executive Committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary, to prepare a programme for said meeting, to make all other necessary arrangements, and to prepare and submit a plan of organization for future meetings.

5. That all expenses connected with the conjoint sessions shall be apportioned equally by the Executive Committee among the special Societies participating.

 Obituary.

—We deeply regret to have to announce the death of Dr. John H. Christie of Chicago, eldest son of Dr. Thomas Christie, Lachate. Dr. Christie, who was a graduate of McGill University, has occupied a prominent position in his profession in the city of his adoption.

—Mr. S. S. Gamgee of Birmingham died suddenly on the 18th ult. He was in his 59th year, having been born at Florence in 1828. In 1857 he was elected to the post of honorary surgeon to the Queen's Hospital, Birmingham, a position which he

held and adorned until his death. Throughout his professional career he was an able contributor to periodical literature. His principal work was on "The treatment of wounds and fractures of the limbs." An earnest advocate of "dry and infrequent dressing," he has done much to bring the present treatment of wounds to its high position. He was a man of great earnestness of purpose and a devoted student of his profession to the last.

Medical Items.

—A female patient recently died in a dentist's office in Brooklyn, N.Y., while taking ether for the extraction of a tooth.

—Sir William Stokes of Dublin, and Mr. Ernest Hart, editor of the *British Medical Journal*, have accepted the office of vice-presidents of the International Medical Congress.

—The number of medical students attending the different German Universities during the past summer session was as follows: Vienna, 2147; Munich, 1304; Berlin, 1175; Dorpat, 862; Wurzburg, 829; Leipzig, 690; Freiburg, 585; Gratz, 464; Greifswald, 461; Breslau, 391; Bonn, 349; Halle, 329; Marburg, 300; Konigsberg, 267; Heidelberg, 266; Kiel, 261; Strasburg, 246; Tubingen, 240; Gottingen, 234; Erlangen, 233; Zurich, 216; Berne, 203; Giessen, 140; Basle, 121; Ghent, 118; Jena, 114; Rostock, 100; Lausanne, 291.

—The recent meeting of the Association of German Naturalists and Physicians was the most successful ever held. The president, Prof. Virchow, delivered a very able address, which we will notice in detail in a future number. There were a large number of deeply interesting medical papers read. Prof. Hitzig of Halle read one on the present position of the cerebral localization question. He did not make a single reference to the labors of the English physiologists in this department. Judging from his paper, one would think that all this work had been performed by Germans. The English physiologists are just as narrow, for in the discussion which took place on the same subject at the late Birmingham meeting of the British Association no reference whatever was made to the work done by outsiders. Unfortunately for the cause of science, this narrowness is not confined to cerebral questions alone. Imagine the barrenness of a discussion on the cerebral centres of vision, where not a single reference was made to the work of Munk of Berlin.