

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

THE
MONTREAL MEDICAL JOURNAL.

VOL. XVII.

DECEMBER, 1888.

No. 6.

Original Communications.

THE CONSTITUTION OF MCGILL UNIVERSITY.

BEING THE ANNUAL UNIVERSITY LECTURE OF SESSION 1888-89.

BY PRINCIPAL SIR WILLIAM DAWSON, C.M.G., LL.D., F.R.S.

The subject of this lecture has been suggested by the departure from among us, within a few years, of several old and valued members of the university, and by the fact that the men who took part in the revival of McGill University under its amended charter of 1852, have now almost entirely passed away, while the few who remain must soon follow. It is therefore desirable that the new generation which has come upon the stage should know something of the causes which gave our university its present constitution, and which have in some respects moulded that constitution as time has proved its original excellences or defects. Great universities are not usually created by any sudden or arbitrary act of establishment. They grow by slow accretion of men and means, and adapt themselves by degrees to the changing conditions of their existence, while the value and stability of their organization are proved by the vitality and vigor of growth which they exhibit, and the capacity which they show to continue in efficiency after their originating minds have passed away. McGill is now in the position to show the capabilities of its constitution in this respect.

Of the original band of citizens of Montreal who constituted the first board of governors under the new charter, Mr. Ferrier, the late Chancellor, was the sole survivor. Mr.

David Davidson, it is true, one of the most able and zealous of these men, still lives, but he has long since removed from Canada and has resigned his connection with the university, though showing his interest in education in Montreal by continuing his gold medal in the High School. Of the staff of professors organized between 1852 and 1855, not one now remains on our list of teachers except my friend Dr. Howard and myself. A few others still live, but have retired from active work. Thus the men of the university have passed away and have been renewed in about thirty-three years, and the government and educational work are for the most part in new hands, while ten generations of students have in the meantime graduated and have gone into the active work of life, and very many of them are older men than Dr. Howard and I were thirty years ago, and are now occupying the most important positions in the university and in public life.

McGill University, like many of the greater universities and colleges of other countries, originated in a private endowment. It is, however, almost alone in this respect among the colleges of Canada, and owes I think much of its prosperity and success to this fact, more especially in connection with the unique position which it occupies as the highest educational institution of an influential, progressive and intelligent minority in this city and province.

The founder of the university, James McGill, was born on the 6th October, 1744, in Glasgow, Scotland. He received his early education and training in that country, but of these little is known. He arrived in Canada before the American revolution, and appears, in the first place, to have engaged in the Northwest fur trade, then one of the leading branches of business in Canada. Subsequently he settled in Montreal, and, in partnership with his brother, Andrew McGill, became one of the leading merchants in the little town of about nine thousand inhabitants which then represented our commercial metropolis. His settlement in Montreal, and his marriage with a lady of French parentage, the widow of a Canadian gentleman, occurred a little before the beginning of this century, and from that time till his death, in December, 1813, he continued to be a prominent citizen of Montreal, diligent and prosperous in his business, frank and social in his habits, and

distinguished for public spirit and exertion for the advancement of the city. His name appears in several commissions relating to city matters—for instance, that for removing the old walls of Montreal. He was Lieutenant-Colonel and subsequently Colonel of the Montreal City Militia; and in his old age, on the breaking out of the American war of 1812, he became Brigadier-General, and was prepared in that capacity to take the field in defence of his country. He represented for many years the West Ward of Montreal in the Provincial Legislature, and was afterwards a member of the Legislative and Executive Councils. Mr. McGill is described by his contemporaries as a man of tall and commanding figure—in his youth a very handsome man, but becoming corpulent in his old age. He was a prominent member of the association of fur magnates known as the “Beaver Club.” A reminiscence of a gentleman, then resident in Montreal, exhibits him, when an elderly man, at one of their meetings, singing a voyageurs’ song with accurate ear and sonorous voice, and imitating, paddle in hand, the action of the bow-man of a “North canoe” in ascending a rapid. The remembrance of another contemporary represents him as much given to reading and full of varied information; and it is certain that he cultivated and enjoyed the society of the few men of learning from the mother country then in the colony. There are, indeed, good reasons to believe that his conferences with these gentlemen had an important influence in suggesting the subsequent disposal of a large part of his fortune in aid of education.

In this connection it may be stated that Mr. McGill’s resolution to dispose of his property in this way was not a hasty death-bed resolve, but a mature and deliberate decision. He had taken a lively interest in the measures then before the Government for the establishment of an educational system in the Province of Quebec, and had mentioned, many years before his death, his intention to give, during his lifetime, an endowment in aid of a college, if these measures should be carried out by the Government. But many delays occurred. From 1802, when the act to establish the “Board of Royal Institution for the Advancement of Learning” was passed, until the time of Mr. McGill’s death, the persistent opposition

on the part of the leaders of one section of the people to any system of governmental education, and the apathy of some of the members of the Council, had prevented the appointment of the Board, or the completion of the liberal grants of land and money for educational purposes which had been promised. Mr. McGill was apparently weary of these delays, and feared that he might be cut off by death before he could realize his intentions. He had also the sagacity to foresee that a private endowment might force the reluctant or tardy hands of the members of Government to action. Accordingly, in his will, prepared in 1811, more than two years before his death, he bequeathed his property of Burnside, and a sum of ten thousand pounds in money, to found a college in the contemplated provincial university, under the management of the Board of Royal Institution; but on condition that such college and university should be established within ten years of his decease. Three leading citizens of Montreal, the Honorable James Richardson, James Reid, Esq., and James Dunlop, Esq., and the Rev. John Strachan, afterwards Bishop of Toronto, were appointed Trustees under the will. The wise liberality of a good man is often far more fruitful than he could have anticipated. Mr. McGill merely expressed a wish to found a college in connection with a university already provided for by the generosity of the British Government. But the grants promised the university were not given, and the English settlers in the province of Quebec were deprived of the provisions for education made by the liberality of the Crown in other colonies. In the providence of God, Mr. McGill's bequest intervened to avert some, at least, of the evils arising from this failure. In consequence of his will, a pressure was brought to bear on the Government, which resulted in the appointment of the Board of Royal Institution in 1818; and though, from the refusal of the French to take part in it, it was almost entirely English in its composition, it proceeded to the establishment of non-denominational schools. These schools were never very numerous—about eighty being the maximum number; but they formed the beginning of the present school system. The Royal Institution, being a Government board, had, on that account, too little of the popular sympathy, especially among the settlers

in the Eastern Townships; and the Local Legislature practically refused to acknowledge it, and set up in opposition to it the denominational system of "Fabrique schools" in the French parishes; and, finally, its functions were restricted to the McGill College alone, by the new Education Act which followed the rebellion of 1837.

In so far as the McGill College was concerned, the Royal Institution at once took action by applying for a royal charter, which was granted in 1821, and prepared to take possession of the estate. This, however, owing to litigation as to the will, was not surrendered to them till 1829. They also demanded the grants of land which had been promised, and received fresh assurances; and, as an earnest of their fulfilment, the Government of the day was authorized to erect a building for McGill College, and to defray the expenses out of those "Jesuits' estates" which have in our own time given to the Legislature of Quebec so startling and exceptional celebrity. But the hopes thus held out proved illusory, and the college buildings had to be begun with the money left by Mr. McGill, and were at length completed only by the liberality of another citizen of Montreal, the late Mr. William Molson.

In the year of Mr. McGill's death, the population of Montreal was scarcely fifteen thousand, and of these a very small minority were English. One-third of the houses were wooden huts, and the extent of the foreign trade may be measured by the nine ships from the sea, of an aggregate of 1,589 tons, reported as entered in the year 1813. The whole English population of Lower Canada was very trifling. There was no school system, and there were no schools, with the exception of the seminaries of the Church of Rome, and a few private adventure schools. It seems strange that, in such a condition of affairs, the idea of a university for Montreal should have occurred to a man apparently engaged in business and in public affairs. Two circumstances may be mentioned in explanation of this. The first is the long agitation on the part of some of the more enlightened of the English colonists in behalf of the establishment of a university and a system of schools. As early as 1787 the Legislative Council had taken action in the matter, and had prepared a scheme of general

education; but this infant Hercules was, according to the testimony of Abbe Ferland, in his life of Bishop Du Plessis, "strangled in its cradle" by a remonstrance written by Du Plessis. In 1801, the project was revived, and the Act for the establishment of the Royal Institution was passed; but the new scheme was for the time foiled by the refusal of the Roman Catholic clergy to act on the board; so that, as another learned priest, Rev. M. (now Bishop) Langevin, informs us in his "Cours de Pedagogie," it was without result, "thanks to the energetic vigilance of the Roman Catholic clergy." Mr. McGill was familiar with these movements, and no doubt was somewhat displeased with the "energetic vigilance" above referred to, and with the yielding of the Government to such opposition. He knew what colleges and a school system had done for his native country, and that the withholding of such a system from the new settlers in this province would involve semi-barbarianism, leading to poverty, discontent, superstition, irreligion, and a possible war of races. In so far as these evils have been averted from the Province of Quebec, he has certainly contributed to the result more than any other man of his time.

A second circumstance which may have aided Mr. McGill in his resolve was of a different and more personal character. In 1797, General Simcoe, the first Governor of Upper Canada, and his Executive Council had decided to establish a seminary of higher learning in that province. They had invited Mr. Strachan, a graduate of St. Andrew's, to organize this institution. He arrived early in 1799, but only to find that his patron, Gen. Simcoe, had been removed, and that the plan had fallen to the ground. Greatly disappointed by this, Mr. Strachan opened a school in Kingston, and subsequently occupied, as a clergyman of the Church of England, the mission of Cornwall, and commenced the Grammar School at that place, where many men, subsequently of note in Upper Canada, were educated. A year before McGill's death, Strachan was transferred to Toronto, of which diocese he was afterwards Bishop. The precise circumstances which introduced to each other the future Bishop and the Montreal merchant are unknown to me. It is certain, however, that they were friends, and that the young man who had come to Canada with such bright

hopes of educational usefulness, destined for the time to be disappointed, and the wealthy citizen meditating how best to disarm the opposition which had so long deprived Lower Canada of the benefits of education, had much in common. It seems at least highly probable that Strachan had a large share in giving to Mr. McGill's wishes the form which they afterwards assumed, and there are some reasons for believing that Mr. McGill had hoped that his college might have attracted to it the abilities of the young teacher who seemed slighted in Upper Canada. It is also known that in the first attempt to organize McGill University, in 1823, Strachan was invited to a professorship; but the career opening to him in Upper Canada was already too tempting to permit him to aid in this way the project of his old friend.

The value of the property bequeathed by Mr. Jas. McGill was estimated, at the time of his death, at £30,000; and it has since become much greater, owing to the growth of the city. The sum was not large in comparison with many other educational bequests; but it would be difficult to estimate its value to Canada in general, and to Montreal in particular. Gathering around it the gifts of other liberal men, it has sustained the McGill University, and carried it on to its present point of usefulness and success as a source of literary and scientific culture. Hundreds of professional men in all parts of Canada bear testimony to its value; and the city derives from it much of its higher character as a centre of learning and practical science. Indirectly, it has benefited the cause of common and Grammar school education, through the action of the Royal Institution, through the services of students and graduates as teachers, and through the McGill Normal school, which, though supported by Government, would scarcely have been established but for the influence of the college. Those who have in these ways received its educational benefits are to be found in all parts of the country, contributing by superior skill and intelligence to the common good. If the future may be anticipated from the past, its utility will, in the time to come, go on increasing and widening, growing with the growth of our country, and pervading all departments of useful and honorable occupation. The experience of older nations has shown that such educational endowments survive

all changes, and go on, bearing fruit from age to age. It will, doubtless, be so here also, and the time will come when the original endowment of McGill will appear but as the little germ from which a great tree has sprung—or as the spring which gives birth to a mighty river.

THE AMENDED CHARTER.

I have referred at some length to these points because they constitute an important element in the origin, not only of the university, but of its constitution, as based on its royal charter. As already stated, this was granted in 1821, and under it were carried on for thirty years the early operations of the university—embarrassed by pecuniary difficulty, owing to the failure of the Government to give the promised public aid, and by the structure of the charter itself, which was cumbersome and unwieldy, and unsuited to a small college in the circumstances of this country. The result was that, after nearly thirty years of struggle, the university, with the exception of its medical faculty, was almost extinct, and that it was without sufficient income even to sustain the scanty staff which it then possessed in the faculty of arts. Its existence at this time seems to be largely due to the persistency with which the late Vice-Principal, Ven. Archdeacon Leach, clung to its interests. It was then that several gentlemen, citizens of Montreal, assumed the responsibility of its renovation, and secured an amended charter under which its latter work has been carried on.

Of the noble band of men who at that time undertook this herculean and, in the view of many, desperate task, Day, Ferrier, McGill, Anderson, Davidson, Coffin, Ramsay, Holmes, Robertson and Dunkin, none has left more of the impress of his mind on our constitution than the last named, the Hon. Christopher Dunkin. Dunkin was a man of high culture and eminent ability. He had passed through a somewhat exceptional university career. The son of a widow with limited means, he entered the University of Glasgow at the age of fifteen, and came out at the end of the session as the highest prizeman in his class. In the meantime the new University of London had been established; and as his mother resided in that city, he naturally left his Glasgow college and entered the

new Metropolitan university. Here, in his second year, he again carried off the highest honors. His mother having married Dr. Barber, who had been appointed instructor in elocution at Harvard University, he followed her to the United States and completed his college career at Harvard, where he was appointed a tutor in Greek before he had attained the age of twenty-one. He came to Canada and entered on the study of law shortly before the stirring times of 1837, and was engaged under Lord Durham and Mr. Buller in drawing up the celebrated report which prepared the way for responsible government and the existing constitution of this Dominion. A preparation so varied and extensive added to his acute intellect, his unwearied industry and his intense educational zeal, admirably fitted him to be the acting member of the new Board in the amendment of the charter and constitution of the statutes of the university, which still remain essentially as they were when they left his hand. But it required all the influence and business capacity of his colleagues, and especially the tact and experience of Judge Day and the strong faith and Scottish persistency of Mr. Ferrier to give form and effect to his plans. One act of the latter gentleman deserves mention in this connection. He had been the president of the Board of Royal Institution, but voluntarily resigned his position in favor of Judge Day as the most fitting head of the university—to resume it under the better conditions of a much later time.

THE FACULTIES.

The several Faculties of McGill College have large independent powers. This grew up in the old condition of the university, when the faculty of medicine had to sustain itself and to carry on its own affairs almost independently, and the autonomy which it possessed has in many respects been extended by the statutes to the other faculties. Each faculty has independent powers of framing regulations as to details of the course of study, examinations, admissions, discipline and government of students, fees, and in general all things relating to the internal government and discipline of its portion of the university system. It has also judicial powers of hearing and determining complaints as to violation of its rules. These

wide powers are limited only in two ways. New regulations or repeal of those in force must be approved by corporation, and no student can be expelled without consent of corporation. The functions and powers of professors are determined in the first instance by the terms of their appointment by the governors, and as to details, by the rules and action of their faculty. The Dean of each faculty has the same general supervision in the faculty which the principal has in the university; and the dean of the faculty of arts is ex-officio, vice-principal.

The above portions of our constitution relate to the university and to McGill College, which is the University College, properly so called; all others being affiliated colleges of the university, though the charter gives power to have other colleges co-ordinate with McGill should endowments be given for them.

THE GRADUATES AND STUDENTS.

What shall we say in regard to this great body of the university itself, its hundreds of graduates and students, ranging from aged men who have long ago attained to the highest standing in their professions, and who are the seniors and magnates, not only in the academical sphere, but in the great world without, down to the newest freshman just come up from school. This great body has also under our constitution its duties, its rights and privileges as varied as the differences of its members in age and standing.

Let us begin with the student. He may be defined to be one who is in the intermediate stage between a school-boy and a graduate. In this condition he is still *in statu pupillari*, but not at all in the school-boy stage, while he has not reached to the freedom which he attains after taking his degree. He has become a member of the university, a proud title which connects him with much that is best and greatest now and in the past. In the words of our old charter, he has acquired the "liberty and faculty of taking the degrees of bachelor, master and doctor in the several arts and faculties at the appointed time," and has "liberty within himself of performing scholastic exercises" to that end. You observe his position is expressed by the words "liberty and faculty"; but these are to be used for a special purpose. He has not liberty and faculty to be

idle and waste his time, or to occupy himself with matters foreign to his educational course, or to the objects for which the university is instituted, but liberty to take certain degrees and perform such exercises as may tend thereto. The same liberty in short, that a runner has who follows a definite course marked out for him, and strains forward to a goal that he may win a prize. Yet this is liberty in the true sense. The runner is not driven onward by dread of the lash, he runs freely, because he desires to do it, yet with regard to the rules of the course, because he values the victory and the prize. The student is not a slave, but an athlete; and a main object of the college is to train him to act thus for himself, well and wisely. The student is very apt not to realize the full importance and responsibilities of his position. Many men of greater age fail to do this. But no greater service can be rendered to him than to direct his attention to the fact that all the machinery of the university exists for him, and that in the few years in which he passes through his college course, he has to lay the foundations on which his life must be built. He has to lay these for himself, for all that the best academic system can do is to give him the "liberty and faculty"—the means and opportunity—to educate himself.

If I say little here of the undergraduate societies, it is not because I think lightly of them. They are in truth most important, representing as they do the spontaneous efforts of the students in the directions of physical training, of culture of the powers of thought and expression, and of the higher spiritual life. The Athletic and its several clubs, the Literary and the Delta Sigma and the Young Men's Christian Association and the Theo Dora are all of the highest value with reference to these great ends.

The transition from the life of the student to the position of the graduate is one even more strongly marked than that from the school-boy to the student. As this has formed the staple theme for valedictory addresses from time immemorial, I do not propose to poach on the domain of the valedictorian, already so much at a loss for anything new or striking. There is, however, one phase of the position of the graduate which in the multitude of valedictories to which I have had the pleasure of listening, I have not observed to be much noticed,

and that is the new relation in which the graduate stands to the university, and which he not infrequently does not seem distinctly to comprehend. The student is under the tuition and control of a faculty. This relation ceases at once on his graduation. He no longer belongs to McGill College as such, or to any faculty of it, but to the university as a whole. As a student he was in a state of pupilage, being shaped and fitted by the hand of masters for the place he is to occupy. As a graduate he has left the workshop and has been set up on his own pedestal, in presence not merely of his classmates, but of the world. As a student he is fed with milk and nourished as a child of the university, as a graduate he earns his own manly food and may hold out his strong arm to sustain the mother that has nursed him. Graduates should keep these things in mind, and should be prepared to weigh well their true relation to the university, which now entails grave duties of aid and support rather than advantages to be enjoyed by them, and which connects these duties with the university as a whole rather than with any particular college or faculty.

The graduates are a great and increasing element in the constitution of the university. Individually the success in life of every graduate is a recommendation of his university, and he has much power to advance its interests both by commending it to others and by giving it, as many have done, substantial aid. Collectively the graduates can do much as a society, by aiding in our struggles against obstacles which meet us in this province, by promoting all improvements and movements in advance, by placing us in better relations with non-academical world; and in general by lending their countenance and support in every way to the cause of higher education. Much of this legitimately belongs to the Graduates' society; and it would seem that the time has arrived when this might enlarge itself by having, as in the case with the large American universities, branches in various parts of the country. Above all, under the constitution, the graduates enjoy a large share of influence in the corporation. Sometimes this is measured by their number of direct representatives, but that is a mistake. Eight members in a body of forty-four may seem to be a small representation, but in our corporation there are at present nine other graduates who

have seats otherwise than by direct representation, making seventeen in all, and it is absolutely certain that at least half of the available members of corporation, that is of those who can ordinarily attend meetings, will always be graduates of this university, and that the proportion of graduates must tend constantly to increase. But representation in a college corporation does not depend merely on numbers. One leading, influential and popular man, regular in his attendance and zealous for good, is of more value than a dozen who are inert, careless, or unnecessarily aggressive. Careful selection of good representatives and retaining them in office for a number of years, and allowing them to be absolutely free and untrammelled by any previous pledges, will give weight and power to the graduate representation, and will constitute an argument for its further extension. The graduates, I think, are becoming more and more aware of this, and are taking more interest in the election of their representatives.

RELATIONS TO THE PUBLIC.

I have now exhausted the more important element in our constitution. To a careless listener or reader it may seem complex and cumbrous, but, after an experience of many years, I see no reason to doubt its working efficiency, and it is deserving of notice that few jars or conflicts have characterized its action, and while there have no doubt been differences of opinions as to details, there has been practical unanimity as to important methods and principles, while there has been unquestionable progress in every department—progress indeed necessarily intermittent and unequal; for we cannot advance without now and then placing one foot in front of the other; and in a body where there are so many interests represented, and where no one will can be dominant, there must always be occasional delays and detentions, trying to some. I have myself a large packet of "abortive schemes," containing projects started but nipped in the bud, and which I look over now and then to see if the time is approaching when any of them may have practical effect. Others may have like schemes and projects, but we must be content to wait. No constitution is perfect, but ours has at least the merit of having grown to suit our environment, and if this

growth continues in a natural manner we may hope that when the present sapling becomes a stately tree it will preserve its regularity and symmetry, and will be so adjusted and proportioned in its parts that no storm will uproot it or break it down, and that it will stand as a thing of beauty and of perennial fruitfulness, as "a tree planted by the streams of water that bringeth forth its fruit in its season." Let us bear in mind that its growth is to be promoted and its safety secured, not by continual attempts to bend it hither and thither, to lop off a branch here and there, or to cut into some shape that pleases present fancies, but by giving its roots due nourishment and allowing it freedom to develop itself in the air and in the sunlight. The three great enemies it has to dread are the borers and caterpillars that nestle in the wood and foliage, the ruthless woodman who would girdle its trunk or cut down its branches, and the lack of due nourishment from the soil which supports it.

To drop the figure, we have to dread in our circumstances: First, a selfish or reckless spirit growing up among ourselves, and a want of that enlightened devotion to the cause of education and the common good which characterized the founders and early friends of the university; Secondly, the effects of such unwise legislation as that which has recently consigned the control of our faculty of law to the tender mercies of an irresponsible professional board, on which the university has no representative; Thirdly, a failure of that aid and support on the part of the Protestant population of this city which has so far sustained us so liberally. I have space to say a few words only as to the last.

Hitherto McGill University has had the greatest cause to be thankful for the enlightened liberality of the citizens of Montreal, and it has often seemed as if that liberality was forthcoming just at the junctures when some pressing want was staring us in the face, without means of meeting it. The original endowment of Mr. McGill came at a great crisis in the affairs of this province, when there was danger that no adequate provision would be made for the educational wants of its English population. I can never forget the liberal subscriptions of 1856, which, headed by the endowment of the Molson chair of English, gave the first augury of success in

the revival of the university under its new charter. The completion of our university buildings by Mr. Wm. Molson in 1861 came at another critical time. The endowment of the Peter Redpath, Logan and John Frothingham chairs, in 1871-73, gave another stimulus and accession of force when our progress seemed arrested by want of means. The foundation of the Peter Redpath Museum in 1880 placed one important department in advance of every other Canadian university, and made way for extension in other directions. The Scott, Mills and David Greenshields endowments of 1882-84 were just in time to prevent contraction of our work under the great diminution of income arising from the fall in the rate of interest. The large endowments to the medical faculty in 1884-5 met the necessary expansion of its teaching power and of its rooms and laboratories demanded by the great extension of its course and increase of its students. The last great endowment, that of the Hon. Sir D. A. Smith, for the higher education of women, was offered at the moment when the university seemed called on to enter on this work without adequate means. Many such instances rise to my remembrance, and impress me with the belief that a kind Providence has watched over our efforts, and has intervened to sustain us just when hearts and hands were beginning to fail. I cherish the faith and hope that it will be so in the future, and look forward to the time when our law faculty will be adequately endowed, when our unendowed chairs in the faculty of arts will be suitably provided for, when our heavier chairs will be divided or furnished with assistance, when we shall have enlarged accommodation for our library, when we shall have a larger convocation hall, a dining hall and college offices, and rooms for college societies; when we shall have a college plant-house and botanical garden, a mechanical workshop, and a new university gymnasium, and when our special course for women will have grown into a well-appointed Royal Victoria College, co-ordinate with McGill. All these things and more are now desirable, and I have no doubt they will be provided, but not perhaps until our faith and self-denial and self-sacrificing industry are a little longer tried. They may not be realized in my time or the time of the older workers of to-day; but the university will not die with us. The history of college

endowments in the Mother Country shows that these are the most permanent of all investments, outliving revolutions, changes of dynasty and even civil wars, and tending constantly to attract fresh means to themselves. May McGill University equal them in permanence, and at the same time be exempt from the defects which have sometimes marred their usefulness, and from the abuses which for a time have grown up around them. We may, I trust, hope that in our new and young society, and in the greater light of a cultivated and progressive age, this may, under God's blessing, be our happy destiny.

CLINICAL MEMORANDA.

I.—FLOATING KIDNEY. II.—THE ANATOMICAL TUBERCLE.

BY WILLIAM OSLER, M.D.

Professor of Clinical Medicine, University of Pennsylvania.

I.—*On Certain Symptoms of Floating Kidney.*

The condition in question may cause no other disturbance than a sense of weight or dragging in the abdomen, but there are cases in which more serious symptoms arise, partly the direct result of the dislocation and partly of the nature of what we term, in the absence of fuller knowledge, reflex phenomena. A remarkable instance has recently been under observation in the person of a physician, who gave the following history :

Aged 40, was of excellent family history, and had enjoyed good health, with the exception of dyspeptic attacks, until 1878, when he was obliged to give up practice owing to soreness on the right side and general weakness. He went abroad and gained 25 lbs. In 1879 he took a long voyage, and was seasick 46 out of 47 days at sea. He very nearly died of inanition, and at this time, when greatly emaciated, discovered "a moveable, smooth tumor (a lump), on sitting up and during inspiration, just below the margin of ribs on right side." He returned to practice in 1880, and until September 1887 kept at work, though never feeling comfortable in the abdomen, and at times suffering much with pain and flatulence. During this period he has had several attacks of intestinal and gastric trouble associ-

ated with pain, vomiting, constipation and then diarrhoea; the stools clay-colored, but neither the skin nor the urine were bile-stained. In September 1887 he gave up practice, and the abdominal symptoms have been somewhat better, though his general health has been impaired by an attack of epididymitis.

Examination showed a moderately well-nourished man; abdomen full, nowhere tender on pressure. Stomach tympany reached high in the chest, and "splashing" could be readily obtained by manipulation or by rapid contraction of the abdominal muscles. No tenderness in lower region. By making a forced inspiration or rolling quickly on to the left side the patient could cause a tumor to emerge in the right hypochondriac region, just beneath the edge of the liver, and which could be moved over to within an inch of the middle line. It was firm, rounded, and on its upper and anterior aspect a distinct depression could be felt. By pressure it could be made to slip back under the liver. There could be no question that this "abdominal tumor" which had caused so much mental and bodily distress for so long a time was the movable right kidney. In the erect posture a marked difference existed in the appearance of renal regions behind, particularly apparent in looking over the patient's shoulders. There was a distinctly deeper depression on the right side corresponding to the 11th and 12th ribs. Percussion gave flat tympany over the right renal region when the patient was on the left side or when the kidney was voluntarily dislocated by a deep inspiration. When it was pushed back, or when the patient lay on his back on the edge of the bed, there was dulness similar to that which existed on the left side. The urine was normal.

The symptoms have been chiefly gastric, and there is now moderate dilatation of the stomach, a condition which has resulted most probably from the pressure of the dislocated kidney upon the duodenum. Several instances of the kind have been reported. Gastro-intestinal attacks may be the only effect of a floating kidney, and the occurrence of paroxysms of pain with vomiting may even lead to the suspicion of organic disease. The condition in women is very often associated with nervous

symptoms, which complicate the problem of treatment. An abdominal bandage, with a well-adjusted pad, will in some cases give great relief, but not infrequently it seems impossible to retain the floating organ by mechanical means, and even nephrography is not always successful. I have known the *diagnosis* of the condition to be followed by relief to some of the most distressing symptoms, and in the above reported case, the patient, a doctor, took a substantial dinner—the first for many months—when it was announced that the “abdominal tumor” was only a floating kidney.

II.—*The Anatomical Tubercle.*

There have been of late years several very interesting observations upon the common post-mortem wart, or as it was named by Wilks, who first described it, *verruca necrogenica*. It is now very generally regarded as a local tubercle, the result of inoculation. The presence of bacilli has been demonstrated in several instances. They consist chiefly of granulation tissue, occasionally with giant cells, and with papillomatous outgrowths of the epidermis, which gives the tubercle the wart-like character.

They are met with in persons who perform many post-mortems, and in those whose business brings them into close contact with animals and animal products. Their occurrence is by no means infrequent. In Germany it is quite common to see the hands of the demonstrators of pathology (and more particularly the attendants in the autopsy rooms) disfigured by these structures.

I have myself eight or ten scars from these warts, which I have had at times on my hands during the past fifteen years. They rarely increase in size beyond a quarter of a dollar piece, are seldom painful, and are only unpleasant on account of the disfigurement. In my case they have lasted variable periods, from four or five weeks to eight or nine months. I have usually found them to disappear spontaneously. Thus, the last one I had was the result of accidental inoculation made from a phthisical subject early in November. I persistently refrained from local treatment in order to watch its development. It gradually spread, and after attaining the size of a ten-cent piece remained

quiescent, but did not disappear until June. As is often the case, it had several small colonies in its neighborhood.

In the treatment of these structures, I have usually found that the oleate of mercury persistently applied with friction causes rapid disappearance.

In Hutchinson's lectures on Lupus, which appeared in the *British Medical Journal* during the early part of this year, the anatomical tubercle is classed as "lupus necrogenicus," and a very good case is made out in favor of placing it among the lupoid affections. He mentions an interesting instance in which a post-mortem wart has persisted for nearly forty years. Although harmless in the majority of instances, there are cases on record, some of which are quoted by Ruhl and Paltauf in their exhaustive article in vol. xiii of *Vierteljahreschrift für Dermatologie und Syphilis*, in which systemic inoculation has resulted from the local sore.

Verneuil suggests, in this connection, that the phthisis with which Lænnec suffered might possibly be associated with the wound which he received many years before at a post-mortem on a phthisical subject. No doubt the reason why systemic infection is not more frequently observed is owing to the unfavorable soil which the skin offers for tubercular processes.

FOUR CASES OF PERITONITIS OCCURRING DURING GESTATION.

BY A. D. BLACKADER, B.A., M.D.,

Instructor in Diseases of Children, McGill University; Assistant Physician, Montreal General Hospital.

(Read before the Medico-Chirurgical Society of Montreal.)

On the morning of April 21st, 1881, I was called suddenly to see Mrs. R., aged 32, a slight and delicate-looking woman, but with a good family history. She was in the sixth month of her third pregnancy, and had been seized suddenly with extreme abdominal pains. The following history was given: She had always enjoyed fair health, but suffered from a tendency to constipation, which at times was difficult to overcome. For this she had consulted me some weeks previously, and was ordered an ordinary pill of aloes and iron. On the evening preceding the

attack she had taken a double dose of these. During the night she had had to rise to attend to one of her children, and in doing so had crossed several times on her bare feet, and in a light dressing-gown, through a passage-way covered with oilcloth, and through which a cool breeze was blowing from a slightly open window. The pains came on suddenly about six hours afterwards. There had been no movement of the bowels. I found her sitting up in bed crying out with sharp lancinating pains. Her features were pale and somewhat pinched. There was slight distension of the abdomen, with great tenderness over all the lower half. The enlarged uterus could be easily felt, but it was difficult to determine whether it was especially the seat of pain, but there appeared to be no special contractions of it. The temperature was 104° ; pulse 140, small and weak. On examination per vagina, the os was found soft and closed; little or no shortening of the neck seemed to me to have taken place. I gave her in pretty rapid succession four hypodermics containing each one-fourth of a grain morphia, applied hot cataplasms, and ordered an enema containing castor oil and turpentine. My morphine, though pushed during the day, failed to control the pains. Her pulse rapidly failed. That same evening Dr. MacCallum saw her in consultation with me, and confirmed my diagnosis of acute peritonitis, most probably idiopathic. By midnight her pulse was scarcely perceptible; suddenly it improved somewhat, her pains assumed a bearing-down character, and in about twenty minutes a six months foetus was born dead. There was no uterine hemorrhage. Profuse vomiting of grumous matter set in, and she expired very shortly. Both her husband and her mother absolutely declined a post-mortem.

On the 23rd June, 1885, I was called to see Mrs. C., aged 28, advanced to between the fifth and sixth month in her fourth pregnancy. She was naturally of a strong constitution, but had been much depressed during past few months by severe family troubles. She did not admit any previous ailment. Two months previously, to ascertain whether she was pregnant or not, I had made a vaginal examination and detected no tenderness nor peritoneal inflammation whatever. On my visit, complaint was

made of slight diarrhoea with abdominal pain, which she attributed to getting her feet wet a few days previously. The pulse was somewhat quickened; the temperature was normal. There had been no previous constipation. A simple anodyne was prescribed. I did not see her again for forty-eight hours. On my second visit the pulse was still quick, 108; temperature 99.8°, and complaint was still made of the pain. She was now confined to bed, a sinapism was ordered, and the amount of opiate increased. Some slight tenderness on pressure in the right lumbar region did not at the time give me much thought. Next morning at 5 A.M. I was hurriedly summoned and told she was much worse. I found her with a very anxious expression, considerable lividity of the face and lips, temperature 102.5°, pulse 120 (weak), and was told that the pain had been very sharp for the last two hours. Previously she had slept well. Tenderness was now marked over right lumbar region, but not so marked in the iliac region, and extended across the median line. Contractions were felt in the uterus, which was tender on right side. There was very slight distension of the abdomen. There had been no movement of the bowels for the past twenty-four hours. Vaginal examination proved that the os was still closed, but soft, and the cervix apparently shortened. There was no surrounding tenderness. I gave a full hypodermic of morphia and ordered $\text{m} \times$ Battley's solution every three hours. Dr. Howard saw her with me at noon of the same day; the temperature and pulse had fallen, and the patient looked in every way better. He agreed in considering that the symptoms pointed to peritonitis, but did not consider them urgent. That evening she expressed herself as comfortable, and able to get a sleep; the tenderness seemed lessened, but at two o'clock labor pains set in, and before I could reach her the child was born. The mother was very pale, her lips were livid, and her pulse thready. There was little complaint of pain, and the mind was perfectly clear. The placenta had been retained, but there was very little hemorrhage. After waiting twenty minutes, and finding no effort at expulsion of the placenta, the assistance of Dr. Ross was obtained, and it was deemed advisable to deliver the placenta,

which Dr. Ross did by introducing his hand into the uterus. The amount of hemorrhage throughout was very slight. She never rallied, vomiting set in shortly, and she died the same evening at six o'clock. I endeavored to obtain a post-mortem, but the circumstances were particularly sad, and the father would not give his consent.

Mrs. S., aged 33, in her eighth pregnancy ; previous confinements normal, with good recovery ; after the last some retroversio uteri with descensus. Enjoyed good health till towards the end of the eighth month, when she caught cold and suffered from an attack of bronchitis, for which she was confined to her bed for a week. While recovering from this, acute parenchymatous glossitis set in, the pyrexia lasting three days, during which the temperature never exceeded 101° . On the fourth morning, at the time of my visit, the swelling had almost subsided, and she expressed herself as feeling comfortable again. That same afternoon I was sent for in great haste and found Mrs. S. with pinched features, feeble, quick pulse, a temperature of 103° , and considerable tenderness over the lower portion of the abdomen, especially in the left groin. No distension of the abdomen. Morphia was given hypodermically, and a mixture containing Battley's solution ordered. Dr. Ross saw her with me two hours afterwards ; her condition was then much improved ; she had snatches of sleep through the night. Another exacerbation set in at one o'clock on the following day ; great pain was complained of on turning to either side, especially the left ; the pain in the left hip was excruciating. That same evening the child was born alive, with comparatively little pain, but very rapidly, not half an hour elapsing from the first decided pain till the completion of the third stage. The strictest antiseptic precautions were used, and there was very slight hemorrhage. Although she expressed herself as comfortable after it was over, the pulse was quick (120) and there was slight pyrexia (100.4°). Dr. Ross saw her with me during the following two days, during which she seemed to hold her own fairly, but towards the evening of the second day her pulse began to fail ; during the night hiccough set in. A consultation was held with Dr. Gardner

early next morning, and arrangements were at once made for abdominal section. By this time vomiting had set in. There was great distension of the abdomen, the pulse was very feeble (120), and there was decided lividity of the lips and extremities. The mind was clear. Death took place, unfortunately, during the administration of the ether, before the operation had been commenced.

Mrs. B., aged 24, consulted me about the end of October, '87, for frequent and painful micturition. She had been married about the middle of August, and the catamenia had not appeared since. As the symptoms did not yield to anodynes and moderate rest with alkalis, I made a vaginal examination, and found a decidedly anteverted, enlarged and somewhat fixed uterus lying against the bladder. As the symptoms were very distressing, and her general health suffered, I insisted on absolute rest in bed. By the end of December she was able to be up and about, and quickly regained her health and spirits. I did not see her again until the middle of February, when she consulted me in reference to obscure pains in right iliac fossa, with a steady ache in the back about the position of the sacro-iliac synchondrosis and occasionally about crest of ilium. There was a good deal of nausea, thickly furred tongue, and constipation, but a quiet pulse of 72, and no pyrexia. No tenderness on pressure was detected. I tried to relieve the constipation with salines and to correct the digestion, and was in part successful, but complaint continued to be made of the pain, though it was much alleviated. On March 2nd, about a fortnight after the commencement of the symptoms, the pain became suddenly much aggravated, apparently after an indiscretion in diet. There was much tenderness over the cæcum, slight distension, temperature 102° and pulse ranging about 100, slight nausea, but no vomiting. The patient was very restless and discouraged. Opiates were administered in full doses, and an enema was given daily, but the symptoms continued about the same. On the evening of the 5th Dr. Browne was called in in consultation. He agreed with me that I had a local peritonitis to deal with. At one time I thought a miccarriage was threatening, but it was apparently averted. On the evening of the 8th or 9th

the symptoms appeared so threatening that Dr. Gardner was also called in at Dr. Browne's request to discuss the question of abdominal section. At this time there was considerable distension, great tenderness all over the abdomen, principally in the right lumbar and left iliac regions, frequent vomiting, pulse weak (120-130), and temperature 101°. Two grains of morphia hypodermically, and two drachms of Battley's solution by the mouth, were given every twenty-four hours for some days to control the pain and permit rest. Turpentine enemata were given daily. Very gradually the symptoms subsided. On the 12th the parotid gland on the right side became inflamed. I feared lest it might be septic, but, fortunately, it terminated by resolution. As it was subsiding the left gland became inflamed and ran a similar course. By great care and keeping strictly to a recumbent position gestation went on to full term. On the 14th May, ten days before the date calculated on, I confined Mrs. B. of a healthy female child. Labor was in every respect normal, and convalescence was good. Though weak and very much reduced in weight, Mrs. B. was able to nurse her child, which seemed satisfied and appeared to thrive. After the third week, nursing was supplemented by artificial food thrice daily. There have been two attacks of abdominal tenderness since confinement—one in the end of June and the other two weeks later, characterized by pain in right iliac region, tenderness and slight pyrexia. At present both mother and child are doing well.

There is no reason to my mind why peritonitis should not occur during gestation, while there are reasons why it might even be of more frequent occurrence at that time than at other periods of life, but judging from the extremely small number of cases I can find reported, it must be of rare occurrence. No reference whatever is made to it in any of the works on obstetrics that I have been able to consult, nor, with the exception of the following four instances, can I find any report of similar cases in the medical journals of the past ten years. In the January number of the *Edinburgh Medical Journal*, W. J. Gow, M.B., of St. Bartholomew's Hospital, London, reported the following case as occurring in the lying-in charity of that hospital:

The patient, aged 32, a stout, well-made woman, had had eight children previously, in all of which the labors had been natural. She was seen for the first time on the morning of May 9th. She complained of frequent, sharp abdominal pains not resembling labor pains in character. Her lips and cheeks were livid, and beads of sweat stood on her brow. Her tongue was slightly moist. There was frequent retching. The hands and feet were cold and clammy, and the pulse was barely perceptible at the wrist and could not be counted. The respirations were rapid, being about forty to the minute. She was quite conscious, and complained of great pain on turning on to her left side. The abdomen was distended and the fœtus could be plainly felt appearing within the uterine cavity. Per vaginam, the cervix was soft, the os dilated to the size of a five shilling piece. The membranes were unruptured and the head was presenting. As there was constant desire to pass water, with inability to do so, the catheter was introduced and an ounce and a half of urine drawn off. The history given was that one month previously her right leg slipped through a hole in the floor; since then she had never felt well. She had reached nearly the full period of her gestation, and was expecting to be confined every day. She had remained in good health until the evening previous, when she was seized with sudden abdominal pain and vomited. She was visited by one of the students, who did not deem her seriously ill and prescribed some mild carminative. Seeing the desperate state of the patient, Mr. Gow decided to perform version and remove the child as rapidly as possible. The patient was placed on her back. A few whiffs of chloroform were administered tentatively, but it was discontinued on account of increased cyanosis. Just as the knee of the child was reached the patient died. In the hope of saving the child an incision was made into the abdomen. On opening the peritoneal cavity a large quantity of semi-opaque peritoneal fluid containing flakes of lymph escaped. The uterus was seen covered with flaky lymph. An incision was made into it and the child extracted five minutes after the death of the mother. All attempts at artificial respiration to restore the child failed. No blood was found either

in the uterine or peritoneal cavity. Inflammation of the peritoneum was most marked over the uterus and in its neighborhood. No cause for peritonitis could be found, but, unfortunately, no complete examination of the body was obtainable. Death took place fourteen hours after onset of symptoms.

Dr. Gow gives the following three additional cases as all he has been able to find reported: A birth is related by Sir J. Y. Simpson as not occurring in his own practice, but in that of a medical friend. The patient had arrived at full term of gestation. She seemed in good health till May 4th, when she had a rigor and complained of pain when moved. The pains recurred at intervals. At 5 A.M. on the 5th the physician was sent for, who found her fairly in labor—the os but little relaxed, but large enough for him to feel the breech presenting. As there seemed no special reason for waiting, he went away and returned at 9 A.M., when he found the patient had just died quite suddenly. On making a post-mortem examination, the abdomen was found filled with a quantity of serous fluid, in which some fibrinous flocculi were floating. The intestines were gummed together loosely with inflammatory deposits. The uterus was also covered with lymph. No local cause for the peritonitis could be discovered.

Dr. Matthews Duncan relates two other cases. One was that of a woman aged 34, unmarried, and arrived at about the end of the sixth month of pregnancy. She was supposed to have used drugs to produce abortion, but there was no evidence on this point. On the 10th January she was seized with great abdominal pain and tenderness. On the 12th Dr. Duncan saw her in consultation, and found her suffering from acute peritonitis, the large pregnant uterus being specially tender. On the 16th she unexpectedly miscarried, labor appearing to be very rapid. There was very little blood lost. On the 19th she died, two and a half days after delivery. The post-mortem showed universal peritonitis. The other case was that of a woman who died of enteritis, and on whom Cæsarian section was performed immediately after death. The full term of pregnancy was nearly reached. On making the post-mortem exam-

ination, the peritoneum was found covered with a thin layer of dense lymph.

In all of these, no exciting cause of the peritonitis was discovered. In one case, however, the purulent serum was found to be foetid, looking as if there had been some connection with the bowel. The diagnosis in these cases will lie between peritonitis, concealed hemorrhage, rupture of the uterus, and, perhaps, rheumatism of the uterus. In my cases, I do not think there can be any doubt that my diagnosis of peritonitis was correct.

Retrospect Department.

QUARTERLY RETROSPECT OF SURGERY.

BY FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S., ENG.

Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Treatment of Empyema.—In an address on the surgical treatment of empyema (*Brit. Med. Journal*, Oct. 13th, 1888) Mr. Howard Marsh advocates early incision and drainage. The aspirator may in rare cases be successful, but its value is doubtful. He advises incision in the eighth or ninth intercostal space, immediately external to the inferior angle of the scapula. Chloroform should be given, and whilst administering it the patient should lie on the affected side, and over the side of the table, so that the action of the sound lung may not be impeded. The opening is best effected by making an incision through the skin and muscles of the intercostal space and then thrusting a director into the pleural cavity and stretching the track thus secured by dressing forceps. In adults, where the intercostal spaces are wide, resection of rib is not required, and occasionally in young children with wide spaces it may be avoided, but usually the intercostal spaces of children are so narrow that removal of a portion of the rib is required; the removal can be accomplished by means of bone forceps. The periosteum had better be removed with the rib. Hemorrhage usually gives but slight trouble. The chest cavity should not be washed out unless the pus is foetid. The solution used for washing out may be a two or three per cent. of boroglyceride, 1 to 1000 of tincture of iodine and

water or boric acid. In cases of empyema operated on within a month, recovery is the rule. In chronic cases, suppuration continues after a free opening has been made, for the lung is bound down and cannot expand to fill the cavity from which the pus has been evacuated. In these cases Estlander's operation, consisting of the removal of portions of two or more ribs, should be performed. This operation is very useful, because it allows the chest wall to fall in and enables the surgeon to introduce his hand and break down any adhesions which may have formed. By this means pent-up pus may often be evacuated. Several successful cases are detailed.

At a meeting of the London Clinical Society on the 26th October, 1888 (*Lancet*, Nov. 3rd, '88), Dr. Handford reported a remarkable case of empyema complicated by loss of vision and bilateral softening of the cerebrum. Patient was a young woman aged 18. In March she was tapped and pus evacuated. In June the cavity was opened by an incision in the fifth interspace and post-axillary line and a quantity of pus evacuated. In August she complained of her eyes, and by September there was total blindness of right eye and then the left. A few days later she became hemiplegic, and died at the end of the month. No distinct abscess of brain found, but there was softening of the occipital lobes, the angular, temporo-sphenoidal, and part of the ascending frontal convolutions on the right side, and on the left side the supra-marginal convolution and the frontal lobe were involved. There was never any hemipia in this case.

In the discussion which followed, Dr. Money said many cases of paralysis occurring during empyema had been recorded which were thought to be functional. He had made three post-mortem examinations in cases of the kind. In each of the three cases abscess of the brain was found. In two of the cases opened by him the brain symptoms did not occur until the rib had been excised. In two cases the brain abscess was on the same side as the empyema. Dr. de H. Hall reported a case where empyema had lasted two years, and when the rib was excised brain abscess terminated the case. One other case was also reported by Dr. Findlay. Dr. Handford, in reply, stated that in his case

the rib was not injured, but that free hemorrhage had taken place.

Injection of Sterilized Air in the Treatment of Pleuritic Effusion.—Prof. Potain, in a paper read before the Académie de Médecine of Paris, advocated a new method of treatment for pleuritic effusions. (*Bulletin de l'Académie de Médecine*, April, 1888.) He evacuates the fluid and then forces in sterilized air. In the first case, in which there was extensive tuberculous pleuritis, he evacuated two litres of sero-fibrinous fluid and pumped in sterilized air; the operation was twice repeated, and cure took place in less than three months. A double catheter was used, and whilst fluid flowed out of one catheter air was injected through the other. Prof. Potain's conclusions are as follows: (1) It is possible to replace completely by air the effusions of pleurisy, provided only sterilized air is used. (2) Air deprived of germs by filtration through cotton exerts no noxious effects and does not provoke decomposition of pleuritic effusions. (3) This procedure counteracts the serious dangers which result from the presence of large effusions in the pleural cavity or from their rapid withdrawal. (4) On the other hand, it enables us to avoid the serious drawbacks of repeated punctures and permits gradual and slow expansion of the lung. (5) Finally, it appears to favor cicatrization and even the definite cure of tubercular lesions by placing the lung in a condition of comparative rest.

Operative Treatment of Pulmonary Abscess.—Dr. Quincke of Kiel reports two cases of pulmonary abscess successfully treated during the past year (*Berliner Klin. Woch.*, No. 18, 1888). A year ago the same author reported two cases treated by operation (*Berlin. Klin. Woch.*, No. 19, 1887). Of the latter, the first had a chronic abscess in the lower lobe of the left lung apparently due to an acute pneumonia two years previously. The abscess was opened, the ribs being resected, and recovery took place with a permanent fistulous opening. Three years after the man was well, the lungs expanded symmetrically, and over the site of operation was a slight depression. The next patient treated in 1887 was a woman aged 26, and presented all the clinical signs of a large pulmonary abscess, including

expectoration of much foetid pus. An attempt was made to set up adhesive pleuritis by the injection of iodine, but this failed, so the abscess was opened. Death took place in three weeks from purulent pleuritis. In the two cases treated during the past year complete success was obtained. The first was that of a man aged 32, who, after symptoms of an atypic pneumonia of a chronic character, suddenly expectorated a large quantity of foetid pus, and the clinical signs left no doubt as to the existence of a pulmonary abscess, and not an empyema communicating with a bronchus. The eighth and ninth ribs were exposed on the right side by the use of chloride of zinc after a preliminary incision. Four or five centimetres were then resected, and next day chloride of zinc paste was applied to the bottom of the wound. After a week a capillary thread was introduced, allowing the escape of foetid pus, and the canal thus formed was widened gradually by the thermo-cautery until a proper drainage tube could be passed and the pus evacuated. Within three weeks expectoration ceased altogether, and the man, who had improved daily during this time, convalesced steadily. Four months after the operation the patient had gained 45 lbs. in weight and left quite well. The other case was not quite so typical. A woman aged 23 had an acute illness, the symptoms of which pointed either to abscess of the lungs or an empyema communicating with a bronchus. Exploratory puncture yielded no pus. Cavernous signs were at first absent, and the illness was too acute for bronchiectasis. The operative treatment was the same as the foregoing, and in six weeks patient was sent home cured. In this case the first incision was made in the ninth intercostal space, and chloride of zinc paste applied for eighteen days before the ninth rib was resected. The abscess in this case was never opened, but the pus was evacuated by means of a hollow needle.—(*Abstract of Editorial in British Medical Journal*, Sept. 22nd, 1888.)

Quincke's plan of opening these abscesses is very elaborate and tedious, but it is done with the object of setting up an adhesive pleuritis and so avoiding any danger of pus getting into the pleural cavity and setting up fatal purulent pleuritis. The

chloride of zinc paste accomplishes this in a safe and sure way. In the cases reported by Mr. Pridgin Teale, however, the danger of purulent pleuritis seems to have been avoided by free incision and drainage. Some of the cases reported by Mr. Teale are not true pulmonary abscesses, but first subdiaphragmatic or hepatic, discharging through the pleura into the lung. No doubt as our knowledge of lung surgery increases the procedures will be more simple than those advised by Dr. Quincke. Perhaps suturing the pulmonary to the costal pleura before opening the abscess, as recommended by Mr. Godlee, would be better.

Mr. Pridgin Teale, in an address on the *Surgical Treatment of Abscesses of the Lung and Empyema* before the late meeting of the British Medical Association (*Brit. Med. Journal*, Oct. 13, 1888), reported four cases of abscess of the base of the lung recently under his care which were treated by incision and drainage. Two recovered and two died. In two other cases in which abscess in the region of the diaphragm was suspected he explored with an aspirating needle under ether, but no pus was detected. Both cases died in a few days unrelieved. In one case the collection was thought to be in the pleural cavity, but was found in the lung; in another, it was thought to be in the base of the lung, but proved to be beneath the diaphragm, and the exploratory puncture with the trocar had gone through the pleural cavity and diaphragm before it reached the pus—the abscess was above the liver. Both these cases recovered. The two fatal cases are also interesting. In one, the trocar was thrust between the tenth and eleventh ribs and reached pus; an incision was made, and it was found that the abscess was surrounded by ragged liver; three and a half pints of pus were removed. Then a large opening was discovered in the diaphragm leading to the base of the pleural cavity. The cavity was drained, but febrile symptoms ensuing, another opening was made above the diaphragm, between the ninth and tenth ribs; the patient, however, died two weeks after the second operation. In the other case, offensive pus was found by incision between two of the lower ribs; no relief followed; post-mortem examination revealed abscess burrowing behind the liver and into the posterior

mediastinum. Two other cases are also mentioned in the practice of others where recovery took place.

Pulmonary Gangrene Treated by Incision.—At a meeting of the Clinical Society of London, held on the 12th of October, 1888, Dr. Pasteur read a paper on the above subject. The patient was a delicate-looking boy aged 7. His illness was insidious in the onset, but had rapidly developed. On the morning before admission to the Children's Hospital he coughed up a quantity of bright blood, and his mother noticed that his breath was offensive. Ten days after admission he was febrile, had a coated tongue, rapid breathing and gangrenous odor of breath. Over the right upper lobe were impaired, weak tubular breath sounds and diminished voice conduction. During the next three weeks cavity signs developed at the right apex and the remainder of the right lung became pneumonic; the temperature ranged between 100° to 103° . He spat up daily two to four ounces of offensive watery fluid, mostly saliva. Mr. Pollard subsequently operated on the boy. The cavity was incised at the anterior extremity of the right second space one inch from the sternum. Large quantities of gangrenous lung and putrid fluid were expelled through the wound. The cavity reached down to the sixth rib. A counter opening was made in the sixth space and flanged tubes inserted. The cavity was washed out daily once or twice. All went well for a week, when the temperature and pulse rose, the foetor of breath reappeared, and the patient sank three days later. A huge cavity occupied the anterior third of right lung. At the inner part the necrotic process had involved the pericardium and set up pericarditis. The œsophagus was firmly adherent to the right bronchus, and a narrow sinus about three-quarters of an inch long connected the two tubes. No tubercle or caseous suppurating glands. The gangrene was no doubt due to the passage from the œsophagus to the bronchus of some foreign body, probably irritating food material. An earlier operation might have saved the patient.

In the discussion which followed, Mr. Rickman Godlee mentioned a case of gangrenous cavity of the apex of the lung which was opened and drained. The pleura was not adherent, neces-

sitating the securing of the pulmonary to the costal pleura before the abscess was opened. The child died in two days, and then it was found that another gangrenous cavity existed in the apex of the other lung.

Dangers of Resection of the Ribs.—At the late meeting of the French Surgical Congress M. Berger reported two cases of sudden death following resection of the ribs. In patients debilitated by age or long suppuration, or in whom the whole extent of the pleural cavity was involved, he advised that (1) the ninth and tenth ribs be left intact in order to interfere as little as possible with the respiratory movements, and (2) that only a few ribs be resected at a time, thus obtaining a gradual closure of the suppurating cavity. M. Bouilly said he had performed the operation thirteen times, and the best results had been obtained in persons between the ages of 18 and 21, in whom the chest walls were more flexible and accommodated themselves more readily to their new position. M. Ollier advised that in the child only a narrow section of the bony wall be removed, but in the adult an extensive operation was demanded on account of the inelasticity of the chest walls.

Trephining the Gladiolus for Pus in the Anterior Mediastinum.—Mr. Ballance (*Lancet*, Nov. 3rd, 1888) reports a case of a lady, aged 35, who was admitted into the St. Thomas' Home for surgical treatment. She complained of a discharging abscess of the front of her chest, accompanied by constant and severe pain and great tenderness along the breast bone, also fever, anorexia, and loss of sleep. Two years ago, after the birth of her last child, she had a severe illness, and was in bed for more than three months with so-called inflammation of the lungs. Since then she has never been quite well. Three months before admission a lump about two inches in diameter formed over the upper part and left side of the sternum; an incision was made and pus evacuated, but a sinus remained. The sternum was here acutely tender and painful. After entrance into hospital another swelling formed over the fourth, fifth and sixth costal cartilages. The patient had rigors and high temperature, so it was determined to trephine the sternum, which was done by two

openings, one opposite the second intercostal space and the other opposite the fourth ; the intermediate bone was removed and the anterior mediastinum opened and found to be full of creamy pus. The abscess was washed out, and the remaining part of the sternum, which was carious, scraped with Volkmann's spoon. The patient made a rapid and complete recovery, the sternal opening becoming filled up with fibrous tissue. Mr. Ballance concludes his paper with a reference to other published cases of mediastinal abscess, mentioning the cases of Dr. Cooper of San Francisco and Dr. Hanks of Chicago, each of whom trephined the sternum, one to remove a piece of iron and the other a bullet.

Perineal Lithotrity.—At the recent Washington Congress, in the section of Genito-Urinary Surgery, Mr. Reginald Harrison read a paper on the above subject. After giving a history of the operation he related four cases in which he had practised it with some modifications of his own. In three cases the prostate was large, and he was desirous of draining the bladder after the stone had been removed. In the fourth case the stone was very large. The external incision is made as for lateral lithotomy, deep into the membranous portions of the urethra as for exploration of the bladder ; a pair of straight, crushing forceps is introduced, the stone broken up, and the fragments removed. When the bladder was free, it is washed out with a sublimate solution and a large drainage-tube inserted ; the tube is kept in for three or four days. Mr. Harrison's forceps consist of a strong pair of ordinary bladder forceps with a cutting rib down the centre. They are sufficiently strong to break any stone that can be grasped ; they are, in fact, constructed on the same principle as the blades of a lithotrite. By means of these forceps used through the perineal incision a large calculus can be broken down in a few minutes, a process which could not be accomplished under half an hour by the ordinary lithotrite and water evacuation.

Treatment of Urethral Stricture by Electrolysis.—This method of treating urethral stricture has been much recommended by some surgeons, especially by Dr. Newman of New York and Mr. Hurry Fenwick of London. At the recent meeting in

Washington Dr. E. L. Keyes of New York read a paper (*New York Medical Journal*, Oct. 6th, 1888) in which he narrates his experience. After an extended and faithful trial of electrolysis for stricture he has come to the conclusion that as means of treatment for stricture it is absolutely useless. He said that it is a common belief (1) that anyone by following rules may use the method successfully; (2) that electricity does no harm to the urethra; (3) that stricture cured by electricity is dissipated by absorption, and that the urethra remains permanently open. Dr. Keyes says there is no foundation for these beliefs. Every case treated by him was a failure. In one of the cases Dr. Newman himself applied the electricity. In conclusion, Dr. Keyes says: "I may state that electrolysis with a very mild current does no harm; in fact does nothing that I can appreciate and does not interfere with the benefit to be derived from gradual dilatation. I believe the strong current is full of danger both immediately from irritating effect and ultimately from cicatricial effect; and that employment of negative pole does not prevent this. [My study of the subject and the experience it has brought me, digested with all the impartiality I possess, lead me to state that the allegation that electricity, however employed, is able to remove organic urethral stricture radically lacks the requirement of demonstration. The confidence of its advocates that it will radically cure organic fibrous stricture is, in my opinion, due either to continued credulity of the patient and the imagination of the surgeon, or to some special, but fortuitous, act of Providence, upon the co-operation of which, in the case of his own patients, the general practitioner cannot with any confidence rely."

This certainly is very strong adverse testimony from a very able genito-urinary surgeon and a very acute observer. The rage for electricity, like every other rage which has disturbed the even tenor of medical science, will soon die out. Like every new remedy (or old remedy newly applied), it is said to cure everything from a uterine fibroid to a pain in the big toe, and indiscreet advocates herald its supposed victories with marked absence of modesty. Series of cases a few weeks old are re-

ported as permanent cures; others reading the wonders this new remedy accomplishes, provide themselves with enough electrical apparatus to start a telephone company, and having this expensive and garish outfit, use it indiscriminately in every case. The poor patient not only suffers in pocket but in health, still she is delighted to have a fuss made over her, and thinks the doctor is doing wonders. The cases (outside of certain nervous ones) cured by electricity appear to me to be those which furnish brilliant results to faith curers, Christian scientists, and "others of that ilk." No doubt many cases of stricture which can only be detected by means of a No. 25 or 30 sound are benefited by this novel and impressive form of treatment. Like many another much-vaunted remedy when tested in a calm, impartial and scientific manner, a great deal of its glory will pass away, and its true uses and place will be found.

Internal Urethrotomy—Value of Antiseptics.—Mr. Bruce Clarke (*Lancet*, Oct. 13th, 1888) is of opinion that nearly all the febrile attacks which occur after internal urethrotomy are preventible by taking proper precautions. (1) The urethra is rendered as pure as possible by previous irrigation and for several days beforehand both with hot water and corrosive sublimate (1-2000). If the kidneys are diseased or the urine foul then, perhaps, external urethrotomy is the preferable and safer operation. (2) The instrument to be employed should be taken to pieces and carefully scrubbed in soda and water and soaked in carbolic acid (1-20) for at least ten minutes before operation, and only put together the last moment before it is used. (3) When the urethra has been freely divided, a full-sized catheter should be passed into the bladder and retained there for twenty-four hours. The advantages of retaining the catheter are several. The wound is protected from contact with the urine, the tendency to hemorrhage is checked, and the lips of the wound are kept open, thus preventing union by first intention. Great care should be taken that the catheter is aseptic. Mr. Bruce Clarke has treated fifteen cases in this way with the most satisfactory results. Several cases are reported in detail.

Treatment of Enlarged Prostate by Galvano-Puncture.—Biedert (*Deutsche Med. Woch.*, No. 21, 1888) advocates this method. He punctures the prostate through the rectum with a platinum needle, which is isolated up to $1\frac{1}{2}$ centimetres from the tip. The prostate is punctured deeply in two or three places to the depth of $1\frac{1}{2}$ cm. (three-quarters of an inch) and the current turned on for two to three minutes. The needle is attached to the negative pole of a battery of from 12 to 18 elements. If the needle is attached to the anode, cauterization will result and be followed by troublesome abscesses.

Treatment of Piles by Injection.—This method of treating piles was long a secret one, and although it has in the hands of some surgeons proved successful, in many cases failure has resulted. Its chief recommendation to the laity is the fact that the much dreaded knife is done away with. Mr. T. Swinford Edwards states (*Brit. Med. Jour.*, Oct. 13, 1888) that he has tried this method in 38 cases and has been agreeably surprised at its results. There has been only one relapse, three cases have remained well for two years, and fourteen others from two years to six months. In nine other cases sufficient time has not elapsed to discharge them as cured. Mr. Edwards uses the following formula for the injecting fluid: Acid carbol., gr. xii; glycerine and water each one drachm, that is, one in ten. He has occasionally, in severe cases, doubled the strength. If the piles are not down an enema should be given. The patient should be placed on a couch on his hands and knees. With a hypodermic syringe into each pile is injected two to five minims of this preparation; the injection should be performed slowly. The piles are then oiled and returned, and the patient allowed to depart. Mr. Edwards says that there are certain things in regard to this treatment it is well to bear in mind. First make a thorough examination of the rectum to see that no other disease coexists, as, for instance, polypus, fissure, fistula, stricture. Before operating, see that the bowel is empty and the piles are well protruded. If the patient is unable to protrude them with the help of an enema, it is hardly worth while to practice this mode of treatment, and he does not advise injection of the piles

through a speculum as recommended by some practitioners. The piles should be returned immediately after operation, and if they come down subsequently should be immediately returned. The advantages of the method are that the patient is not laid up, suffers no pain, and runs no risk from hemorrhage, tetanus, erysipelas, or pyæmia.

Dr. Kelsey of New York, who has used this method extensively, now says that it ought only to be employed in selected cases.

Treatment of Ununited Fracture of the Head of the Femur.—According to a recent number of the *British Medical Journal*, Prof. Loreta has successfully treated an ununited intra-capsular fracture of the neck of the femur by scraping the fractured surfaces and inserting a bundle of eight to twelve metallic sutures between them and brought out at the lower extremity of the external wound. The metallic sutures were left in five days and then removed. The patient was a man aged 36, who had broken his hip nineteen months previously. The joint was exposed by a long incision behind the great trochanter. In fifty-five days after the operation the patient left hospital, being able to walk with no further support than the attendant's hand.

Disinfection of Surgical Instruments and Dressings.—Dr. Renard states that the disinfection of instruments by a five per cent. solution of carbolic acid is unreliable, the germs withstanding a soaking of from 30 to 45 minutes. Richloride is reliable, but has a chemical action on the instruments. Heating in the flame of a spirit lamp is efficient. Boiling at 212°F. is efficacious if long continued. Steam at 230°F. destroys all germs if the substance be submitted to it for thirty minutes. Renard has a copper cylinder boiler that he fills about an eighth full of water; baskets containing instruments, and provided with feet that raise them from the surface of the water, are put in the cylinder; a lid containing a manometer and a safety-valve is screwed in place, and by means of an alcohol lamp the water is boiled; the air in the cylinder passes off by a stop-cock in the lid, which is then closed and the pressure is increased until it represents a temperature of 230°F. Absolute disinfection is obtained in

half an hour.—(*Quoted in Boston Med. and Surg. Journal*, Sept. 20th, 1888.)

Treatment of Erysipelas.—Nussbaum applies an ointment of equal parts of lanolin and ichthyol and then envelops the parts in salicylated cotton. Next day it will be found that the erysipelas has not only not advanced, but that there has been a notable amelioration of all the morbid symptoms. The swelling, redness and pain has diminished. It is, according to the author, seldom necessary to continue the application for more than three days.—(*Allgemeines Wiener Med. Zeit.*, 1888.)

Surgery of the Brain.—Drs. Seguin and Weir, in an elaborate article on the diagnosis and treatment of tumors of the cerebrum (*Amer. Jour. of the Medical Sciences*, July, August and September, 1888), discuss the present state of the surgery of the brain from both a neurological and surgical standpoint. Dr. Seguin is of opinion that the diagnosis of a case of supposed tumor of the brain should, before operation is attempted, be carefully worked out on the following five lines of inquiry: (1) The diagnosis of the tumor within the skull, and more especially in or upon the cerebral hemispheres. (2) The diagnosis of the exact location of the tumor. (3) The diagnosis of the depth of the tumor; whether it be cortical or subcortical. (4) The diagnosis of solitude or multiplicity of the tumor. (5) The diagnosis of its nature. After discussing these points very fully he states that “the surgeon must be content to have the physician furnish him with a reasonably exact diagnosis of the location of the tumor and with a probability diagnosis of its solitude.” A case of removal of a subcortical sarcoma lying below the edge of the second frontal and the anterior edge of the præcentral gyri is described. A German, aged 39, had suffered for two years from epileptiform convulsions, and for several years before had spasmodic twitchings. The patient suffered, while under observation, from right-sided Jacksonian epilepsy, with facio-brachial paralysis, which pointed to a tumor, probably sarcomatous and subcortical, of the left motor zone in the facial centre. Dr. Weir removed a portion of the skull, 3 by 2 inches, and exposed the brain in this region. The membranes being opened,

the brain was seen to bulge decidedly into the opening ; firm pressure at the posterior part of the opening encountered a deep resistance of a hard mass. It was readily enucleated with the aid of a Volkmann's spoon. The patient made a good recovery, being allowed to go home after a month in good general condition. He still had, however, occasional twitchings, some headache, and slight paresis of right lips and cheek.

Dr. Weir, in the September number of the *American Journal of the Medical Sciences*, discusses the surgical procedures necessary in the proper removal of brain tumors. He advises a curved flap both of the scalp and dura mater, as this secures after protection of the brain. Hemorrhage from the large scalp incision may be controlled to a considerable extent by encircling the head tightly in a line with the occipital protuberance with a rubber band, as suggested by Dr. M. A. Starr. The careful outlining of the region to be explored in the shaven scalp is of no avail after this has been lifted away, and the plan suggested in his recent cases of indicating the site of the trephine centre on the bone itself answers very well. The cranial opening should be a large one. Weir uses a one-inch trephine, Horsley a two-inch. The intervening line can be quickly cut away with a rongeur forceps or a dental or electrical bone cutter. The dura mater should also be freely opened, and the exploring needle is not recommended, as he has known fatal hemorrhage follow its use ; diagnosis of a subcortical tumor can generally be made by palpation with the finger of the bared convolutions ; the finger may be insinuated under the long edge of the opening to a short distance with safety. Important vessels, such as the longitudinal or lateral sinuses, after the removal of the superjacent skull, can be lifted from their places and drawn aside without risk by pulling upon the dural flap. The closure of the opening in the skull is best accomplished by the replacing of the trephine buttons in cloths wrung out of 1-60 carbolic lotion and kept warm during the operation by immersing the vessels containing them in warm water. Hemorrhage from the bone can be controlled by pressure, plugging, or, better still, by crushing the edges of the opening with blunt forceps. Bleeding from

dural vessels may be checked by catching them up with a tenaculum and applying a ligature; vessels of the pia mater are easily torn, and bleeding is best checked by securing them with a tenaculum and applying a ligature with equal traction of its ends. All hemorrhage being checked, a small perforated rubber drainage-tube should be inserted, to be removed the second or third day as the case demands. The dural flap is then stitched with fine catgut; the bone fragments should be now replaced with a few shoots of horse hair inserted among them, to emerge with the drainage-tube. The scalp flap is returned and sutured; over all a sublimate dressing should be applied, with iodoform dusted over the layer resting on the wound. After operation it is better to keep the head elevated.

The remarkable address of Dr. Wm. Macewen at the recent meeting of the British Medical Association in Glasgow has already been alluded to in my address on *Recent Advances in Surgery* published in the Nov. number of the JOURNAL. Space will not permit to quote very fully from an address which has already been so widely published (*Lancet* and *Brit. Med. Jour.*, Aug. 11th, 1888). He reports twenty-one cerebral cases (exclusive of fractures of the skull or other immediate effects of injury) in which operations had been performed by him, in which number there were three deaths and eighteen recoveries. Of those who died all were *in extremis* when operated on; two were for abscess of the brain, in one of which pus had already burst into the lateral ventricles, in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which, besides a subdural cyst over one of the hemispheres, there was extensive softening at the seat of the cerebral contusion in the opposite hemisphere, accompanied by œdema of the brain. Of the eighteen who recovered sixteen are still alive in good health, and most are at work, leaving two, who have since died, one eight years after the operation from Bright's disease, the other forty-seven days after operation from tubercular enteritis. Noting the fact that the removal of large pieces of the motor area produces permanent hemiplegia of the innervated side, Dr. Macewen recom-

mends caution and exercise of judgment in operating on the brain. Each case should be studied on its merits, and surgeons who attempt these operations need not only experience in general surgery but an accurate knowledge of motor and sensory phenomena in connection with the localization of the functions of the brain. He calls attention to the anchoring of the brain to the membranes and the membranes to the skull apt to be caused by plastic effusion and cicatricial formation. The free play of the brain within its water-bed is thus impeded, and every movement causes pulling at this point, with consequent vertigo and subsequent fits, and still later encephalitis. He says that hernia cerebri after operation is always due to decomposition, and that it may be avoided by aseptic measures. False hernia cerebri is identical with red softening of the brain occurring in idiopathic affections without operation, and consequently in these cases hernia would not be obviated by sepsis. In speaking of the note elicited by percussion of the skull as an aid to diagnosis of the consistence of intra-cranial contents, he says when the skull is intact and the ventricles distended with fluid such as may arise in consequence of tumor in the cerebellum exercising pressure on the fourth ventricle, the percussion note elicited affords indications of the altered consistence of the intracranial contents. Dr. Macewen thinks this will be of the utmost value in early life in the diagnosis of tumors of the cerebellum.

At the recent meeting of the American Physicians and Surgeons in Washington Dr. Wm. Keen of Philadelphia exhibited three cases of brain surgery in which he had successfully operated (see *Amer. Journal of the Medical Sciences*, Oct. 1888). The first was a case of removal of a large tumor in the cerebrum, probably arising from an injury at three years of age, in which there was epilepsy and hemiplegia at 23. His age was 27 when the tumor was removed. The patient made a good recovery, and has since been free from his epilepsy. The tumor weighed nearly four ounces and measured 3 by 2½ inches. The second case was that of a man aged 25, and was one of simple depressed fracture of the skull followed in four months by epilepsy; thirteen months later the skull was trephined and the

damaged bone tissue removed. The patient recovered in seven days and was cured of his epilepsy. The third case was one in which the cerebral motor centre for the left wrist and hand had been removed for epilepsy with recovery.

Trephining the Spine for the Relief of Paraplegia.—This operation has been performed many times during the present century for the relief of paralysis following injury. Ashurst has collected 43 cases of such operations, but trephining for the pressure paralysis of spinal caries has not often been performed. Dr. Macewen, in his late epoch-making address at the British Medical Association meeting in Glasgow, stated that he had operated on no less than six cases. In all, the posterior arches of the vertebræ were removed, four to relieve paraplegia caused by pressure from connective tissue neoplasms and displacements of the vertebræ due to caries and traumatism. Out of the six cases operated on four were successful and two died. The first case was operated on as early as 1882; this was one of paraplegia with incontinence of urine and fæces due to connective tissue tumor at the seat of an angular curvature of spine. The patient was nine years of age, had suffered from complete motor and sensory paraplegia with incontinence of urine and fæces for two years. For three years he had had angular curvature of the spine, most marked between the fifth and seventh dorsal vertebræ. The patient had been treated by extension and plaster jackets. His case being apparently hopeless, operation was decided on. The laminæ of the fifth, sixth and seventh dorsal vertebræ were removed. There was no pulsation in the portion of the cord exposed. Between the thecæ and the bone there was found a fibrous neoplasm of an eighth of an inch in thickness which was firmly attached to the thecæ and covered about two-thirds of its circumference. This was carefully dissected off. The cord was then able to expand backwards, and its pulsations, which up to this period were absent, began to show themselves, especially opposite the fifth dorsal. Twenty-four hours after the removal of the pressure the limbs had lost their livid color, were distinctly warmer, the spastic rigidity had greatly lessened, the sense of tickling the soles had returned, and touch had improved.

Eight days later return of movement was observed. Soon he regained perfect control of his sphincters. Six months subsequently he was able to go about without support. Five years afterward he walked three miles to pay Dr. Macewen a visit, and now he is attending school, joins in all games, including foot-ball, and feels strong.

A second but more aggravated case is also related. The patient was a girl and the symptoms indicated changes in the cord itself, which rendered the operation almost hopeless. Operation was only performed at the urgent request of the girl herself. The spine was cut down upon and a dense connective tissue tumor was found between the bone and the thecæ, which was so firmly adherent to both that in some places the thecæ was elevated along with the neoplasm. The portion of the cord exposed was shrunken to half its dimensions and lay like an inanimate rod. The elevation of a sufficient number of laminæ to expose a portion of the cord which pulsated was followed by pulsation of this rod, but there was no distensile pulsation. From the appearances presented at the operation it was considered that there was no hope for her recovering from her paraplegia. However, ten hours after the operation the limbs had lost their lividity and felt warmer to the touch. Four days after operation she had continence of urine and fæces; sensation quickly returned, motion very slowly. In six months she could move her limbs freely, and in eight months she walked a quarter of a mile. Since then she has been well and been able to attend to light house duties.

A third case was also successful, but two others have not been so. One succumbed a month after operation, and the other some months later to an attack of general tuberculosis. In both these cases the temperature was high prior to operation, and subject to exacerbation. Since this experience Dr. Macewen has deemed no case fit for operation in which the temperature did not run an even, regular and continuously normal course.

Another case of paraplegia due to traumatism is also reported. Operation was performed, resulting in the finding of a connective tissue tumor, which was removed. The patient some time after

was able to walk about with support, and a year after he walked about with ease without support, but with a paraplegic gait.

Mr. Victor Horsley's case of successful removal of a spinal tumor causing paraplegia has already been alluded to in the Retrospect. In the *Lancet* of July 14th, 1888, Mr. J. H. Thompson reports a case of trephining for the relief of Potts' paraplegia. A boy aged 7 was admitted into the Manchester Hospital for Sick Children suffering from angular curvature of the spine involving the mid-dorsal region. There was paresis of the lower limbs, with apparent psoas contraction and wasting of the muscles of right side. In spite of the usual treatment by rest, cauterization, etc., the condition grew worse until complete paralysis of both lower extremities with incontinence of urine and fæces ensued. It was then decided to open the spinal canal and relieve pressure. Mr. G. A. Wright performed the operation. An incision about four inches in length was made along the lines of the most prominent spinous processes and the soft parts on each side separated so as to expose the osseous surfaces. Three laminæ were divided on each side and were removed with their attached spines, uncovering the theca of the spinal cord, which at the lower exposed part was found surrounded by a buff-colored, tough, leathery substance; this was cut away with scissors. No point of constriction could be found. The wound was closed and a drainage tube left in. There was temporary improvement evidenced by pin-pricks being felt in the left foot and power of flexion of both thighs, but this soon was lost, and patient relapsed into his former condition. Two months after operation the child was as bad as ever.

Mr. Wm. Thorburn reports a case (*Brit. Med. Jour.*, Sept. 22nd, 1888) which occurred when he was house surgeon in the Clinical Hospital at Manchester in 1885, under the care of Dr. Maccall. A boy aged 6 years had a history of being previously well, when he began to complain of pain in his chest. On the 5th of March he went to bed as usual, and on awaking next morning he was paralyzed. Examination revealed marked prominence of the third and fourth dorsal vertebræ, with absolute paralysis of sensation and motion below the third and fourth

dorsal nerves. The boy rapidly became worse, and had a temperature of 104.8° . As he was evidently sinking it was decided to trephine over the prominent spines; this was done, and on the cord exposed some pus was evacuated and the child breathed more freely for a time, but next day the boy died asphyxiated. No post-mortem was held.

These cases are interesting, and although the two latter did not terminate favorably, yet with Dr. Macewen's experience we should feel encouraged, and hope that in the future permanent relief may be offered in those cases where the paraplegia is unaccompanied by elevation of temperature. In Dr. Macewen's second case we see how a patient in an apparently hopeless condition recovered sufficiently to go about and attend to her household duties. Certainly Dr. Macewen's marvellous results will lead surgeons to alter their former opinions regarding operation in cases of paraplegia due to curvature from spinal caries. It seems remarkable that the wonderful results obtained by Dr. Macewen, although published in 1885 in the *Glasgow Medical Journal* and the *British Medical Journal*, have hitherto attracted but little attention.

Relapsing Typhlitis Treated by Operation.—Mr. Treves (*Lancet*, Feb. 18th, 1888) says that in the majority of cases of so-called typhlitis the appendix is the cause of the disease, and the perityphlitic abscess is more usually an encysted peritonitis due to perforation of this process than to disease of the cæcum. The appendix may become the starting point of inflammation by reason of congenital deformities, of changes that take place in its mesentery, producing bending, of the lodgement of foreign bodies and concretions that are encouraged to remain unmoved on account of the feeble muscular coats of the tube. The source of manifold disturbance can be destroyed by removal of the appendix or by correcting any little deformity of which it is the seat. The statistics of Fitz show that in 11 per cent. of the examples of this affection the patients were the subjects of successive attacks. In one case quoted, five attacks occurred in eighteen months. A case of relapsing typhlitis in a man aged 34 was reported by Mr. Treves, in which, between the attacks, the

appendix was cut down upon, found diseased, and removed. The patient made a good recovery and remains free from further relapses.

Inflation of the Stomach with Hydrogen Gas in the diagnosis of Wounds and Perforations of this Organ.—Dr. Nicholas Senn (*Medical News*, Aug. 25th, 1888) reports a case of wound of the stomach detected by means of the inflation of hydrogen gas. The patient was a man aged 72, who was brought to the Milwaukee Hospital suffering from suicidal pistol wound of the chest. The wound was situated in the sixth intercostal space, and the seventh rib, at its junction with the costal cartilage, was fractured. Blood vomited and expectorated. No hæmo- or pneumothorax. A flexible tube was introduced into the stomach and hydrogen gas forced in. Gas escaped and ignited at the wound of entrance. Laparotomy was performed and the stomach and omentum drawn into the wound. A large perforation was found in the stomach midway between the cardiac and pyloric end on the greater curvature, and another was detected in the lesser curve. The wounds were closed with Czerny-Lembert's suture with great difficulty. Blood in considerable quantity was found behind the stomach. The patient's condition now became serious, and he died before the abdominal wound could be closed. After death the abdominal wound was sutured and inflation of hydrogen gas per rectum made to test the condition of the sutured stomach. A stomach tube was introduced and the gas under pressure of not more than a pound forced through the entire gastro-intestinal canal, igniting and burning, with a considerable flame as it escaped from the end of the stomach tube, which showed that no gas escaped through the sutured wounds. At the post-mortem examination both pleural cavities were found obliterated by old adhesions, which accounted for the absence of hæmo-thorax; the diaphragm was perforated and lower lobe of left lung; tail of pancreas lacerated; the bullet then passed through the left crus of diaphragm, fractured the last rib, and perforated the spinal column, opening the spinal canal. The bullet was found under the skin in the right lumbar region. Dr. Senn says he has been able to make a correct diagnosis in several cases of

obscure abdominal tumors by resorting to rectal and stomach inflation with hydrogen gas, which otherwise would have needed an exploratory laparotomy. The relation of tumors to the different organs can be mapped out and studied with great accuracy by dilating the stomach and different portions of the intestinal canal at intervals with hydrogen gas.

Curative Action of Erysipelas on Tumors.—Prof. Bruns (*Beitrag zur Klin Chir.*, Bd. III, Hft. 3) reports a case of cure after erysipelas of a recurrent melanotic sarcoma of the breast. He has collected 22 cases. In five cases of sarcoma, three were completely and permanently cured (Busch, Biedert and Bruns), the remainder were diminished in size, but soon increased again. The same result followed six cases, in which the diagnosis of carcinoma or sarcoma was not definitely made, and also in three cases of epithelioma. Two cases of scar keloid and one of lymphoma were completely cured after erysipelas. These cases caused the recommendation of erysipelas as a curative measure in cases of malignant tumors which could not be operated on. Fehleisen impregnated with his erysipelas culture five patients, with the result of partial cure. Janicke (1884) reported a case of cure in mammary sarcoma. The curative action of erysipelas is not only confined to malignant tumors, but is serviceable also in chronic skin diseases, ulcers, lues, etc. On the other hand, tumors have been spontaneously cured after other febrile affections, as typhus, pyæmia, etc. ; and Bruns says that fact proves that the disappearance of the tumor is caused by fat metamorphosis of the cell elements and absorption of the same through the fever, and is not due to invasion of cocci, for tumors have disappeared where the erysipelas had not spread to the region of the tumor. The scientific employment of erysipelas for the purpose of removal of tumors should be placed on a proper basis. Unfortunately, hitherto we have had no sure means whereby erysipelas may be inoculated. Two cases (Bruns and Biedert), in spite of repeated inoculations, resisted the influence of erysipelas.—(Quoted in *Centralblatt f. Chirurgie*, No. 34, 1888.)

Dr. L. Feilchenfeld, in an article (*Archiv für Klin. Chir.*,

Bd. xxvii, Hft. 4) on the inoculation of erysipelas in cases of breast cancers unfit for operation, reports such a case which had been lately under his care, and where the inoculation of erysipelas proved rapidly fatal. The patient was a strong, healthy woman, aged 47, who had cancer of the breast with involvement of the axillary and cervical glands. He is of opinion that surgeons will hesitate to employ such a dangerous remedy for the cure even of cases of cancer in which operation is out of the question, until the intensity of the poison has been so modified by culture as to produce a merely local action. The culture with which he inoculated his patient was supplied by Dr. Fehleisen, who himself performed the inoculation in two spots over the deltoid and two on the breast scar.

Reviews and Notices of Books.

The Medical News Visiting List, 1889. Philadelphia, Lea Brothers & Co.

In addition to the ordinary diary for the recording of visits and consultations, this List contains a very useful account of certain subjects, a knowledge of which is necessary in cases of emergency. We have a list of poisons with their antidotes; an illustrated description of Sylvester's method of performing artificial respiration; a description of the more improved methods of disinfecting clothes, rooms, etc., etc.; an account of the chemical examination of the urine; a list of recently introduced drugs; a very full posological and therapeutical table, as well as many other matters of importance. The List is beautifully finished.

The Physician's Visiting List for 1889. Philadelphia, P. Blakiston, Son & Co.

This is the thirty-eighth year of publication of this favorite List. Every year additions and improvements are made. In addition to the ordinary features of lists in general, we have full descriptions of how to carry out Marshall Hall and Sylvester's methods of performing artificial respiration; posological and therapeutic tables; a list of poisons and their antidotes; a list of incompatibles; a description of the more important urinary tests, &c.

Society Proceedings.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

First Triennial Session, held at Washington, Sept. 18, 19 and 20.

(Continued from page 305.)

DR. CHARLES K. MILLS of Philadelphia opened the discussion on *Cerebral Localization in its Practical Relations*. He began by referring to the fact that from the clinical observation of practical physicians sprang the conceptions out of which developed the science and art of cerebral localization. Allusion was made to the discoveries of Bouillaud and of Broca on speech localization; to the announcement by J. Hughlings Jackson in 1864, that certain convolutions superintended the delicate movements of the hand which were under the immediate control of the mind, and to Hitzig's researches having originated from his observing certain ocular movements during galvanization of the heads of his patients. Brief reference was made to the history of American work in localization; to the investigation in 1874 of the New York Society of Neurology and Electrology; to Putnam's discovery that irritation of the white matter beneath the definite cortical centres produced movements similar to those caused by irritation of the centres themselves; to the labors of Wood and Ott on the heat centres, and to the light thrown by these investigators upon the mechanism of fever, and the action of drugs upon different forms of high temperature. Before taking up the surgical aspects of the question, he briefly discussed some of the practical results wrought by cerebral localization for psychological medicine and medical jurisprudence; for general symptomatology and diagnosis, and for medical therapeutics and technique. Trephining for cases of insanity, particularly when guided by the rules of localization, was briefly considered. Two of the recent cases of brain operation, reported by Bennett and Gould and by Macewen, were cited as possibly opening a new field for surgical interference in insanity, the excision of cortical areas as a method of treatment when certain subjective phenomena, such as hallucinations of sight or

hearing, can be given a local habitation in the brain. In turning to the surgical aspect of cerebral localization in its practical relations, Dr. Mills stated that his remarks would be chiefly concerned with questions of diagnosis. He considered, first, the forms of disease and injury in which cerebral localization is a valuable aid to diagnosis; and, secondly, the topographical diagnosis of the parts of the brain accessible to surgical interference, with some sources of error in such diagnosis. The forms of disease in which such diagnosis has been used are intracranial tumors, cysts, fractures, hemorrhages, abscesses, and discharging cortical areas.

In considering the localization of brain tumors, Dr. Mills referred to twenty cases of autopsies occurring in his own personal experience, in about one-half of which the tumors were in surgically accessible areas, and in at least one-fourth of which successful operations might have been performed. He advocated, from experience, the excision of old gummata, and also, in special cases, of tubercular growths. The value of localization was shown in cases of fracture in which the extent of the unseen damage could not be told by the position and character of the visible lesions. Of the different forms of intracranial hemorrhages, subdural, cortical and intracerebral were most amenable to localizing diagnosis. The rules for the local diagnosis of these forms of hemorrhage were then given. Dr. Mills advocated the performance of trephining in exceptional cases of hemorrhage into the ganglia and capsules—cases in which symptoms indicated that the bleeding had not broken into and inundated the ventricles. For his dissections, the best site for operation in such cases, all things considered, would be in the anterior portion of the first or second temporal gyrus. He favored Hughlings Jackson's suggestion of excising localized cortical areas, even when coarse lesions could not be made out, in cases of spasm, beginning locally and deliberately. The inaccessible areas had been narrowed down by the venturesome surgical explorer until reduced to the middle regions of the base and its bordering convolutions, the corpora quadrigemina, the pons and medulla. The characteristics of localizing symptoms were

described as phenomena of irritation, destruction, instability, pressure, invasion, and reflex action. Signal symptoms and the serial order of motor phenomena were discussed. Briefly, in certain regions of the brain an accurate topographical diagnosis could be made with great certainty from positive localizing symptoms. These brain areas include the entire motor zone, in which are embraced the motor or emissive speech area—the region of Broca; the visual area in the cuneus, giving lateral hemianopsia, and the intracerebral tracts, possibly also the angular gyrus, and the lateral surface of the occipital lobe. In other regions of the encephalon the topographical diagnosis could be made with sufficient accuracy, even for surgical purposes, by the study of the positive symptoms, with, in addition, the application of processes of exclusion and successive differentiation. Particular stress was here laid upon the importance of pressure and invasion symptoms. These areas for approximately certain topographical diagnosis include the cerebellum, the prefrontal lobe, the temporal lobe, and even certain cranial nerve districts, as the auditory and facial, when the lesion would be localized within the cranium between the superficial origin of the nerves and their entrance into their foramina or canals of exit. Motor localization has become almost an exact science. The latest physiological research bearing upon the subdivision of the motor area and the light thrown upon the question by surgical operations were discussed. It was held to be imperative for the neurologist and surgeon to have exact knowledge, not only of the anterior and posterior limits, but also of horizontal subdivisions of the motor zone. The old method of subdividing the motor zone into three elliptical or circular areas from above downward was considered insufficient, but the neurologist should be able to locate for the surgeon from a study of motor phenomena at least seven or eight positions for trephining, these positions being selected by a close study of the initial or signal symptoms, the serial order of movements, and also of the amount and character of the temporary paralysis after the seizure and the method of extension of the persisting palsy. Reference was made to operations performed through accurate localization in these areas. The view of Ferrier

as to the localization of the centre for ocular and head movements in the second frontal gyrus was concurred in, and observations were cited in its support; when turning of the head and eyes was the starting-point of the spasm, this localization was sometimes indicated. The fact that cortical oculo-motor palsies were not present as a persistent condition, even with definite lesions of the second frontal gyrus, was explained by the intimate and peculiar connections of the oculo motor nuclei at the base; they do not persist for the same reason that paralysis in the upper distribution of the facial nerve is so seldom permanent. He believed that there was a special centre for the orbicularis palpebrarum movements, probably below and adjacent to the oculo-motor centre. Dwelling upon the sources of error in motor localization, the questions of reflex spasm, of unilateral convulsions due to uræmia, lead, and other toxic agents, and hysteria and hystero-epilepsy were briefly discussed. Sufficient diagnostic difficulties are still present to make it important, in the light of the tremendous impetus toward operation, to examine carefully all questions of differential diagnosis. In certain spasmodic affections, the resemblance between those clearly of reflex origin and those as demonstrably central was very striking. Trigeminal epilepsy, whether dural, facial, dental, nasal, pharyngeal, laryngeal, or of whatever local origin, might cause unilateral convulsions or even mono-spasm. Dural epilepsies are especially worthy of attention, as shown by the researches of Dupuy, Brown-Sequard, Burdon Sanderson, the New York Society of Neurology and Electrology, Duret, Bochefontaine, and Francois-Franck. Franck has made a careful comparison and contrast of cortical epilepsies with those which are reflex and toxic, including those which are due to irritative lesions of the dura mater. He then referred to five cases in his own experience in which operations had been performed for epilepsies apparently reflex in character; two in which spicula of bone had been removed from the dura mater, one in which an old inflammatory lesion of the membranes and cortex from traumatism was present, and two in which scalp cicatrices were removed. While fearing with Franck, that we were not always able to make a trenchant separation between

reflex and cortical epilepsies, some points of separation were indicated.

True Jacksonian epilepsy, Dr. Mills believed, was sometimes reflex in origin—that is, that it was established by intense, persistent peripheral irritation, and even after the irritation had been removed the cortical discharge continued; herein, perhaps, lay the explanation of Jacksonian spasm without coarse lesion, and herein also, perhaps, was to be found the justification for the excision of cortical discharging areas. He referred to a case in which epilepsy, clearly of Jacksonian type, was just as clearly due to a fibroma involving a nerve trunk on the palmar surface of the hand, and in which the patient was cured by removal of the growth. With reference to sensorial localization, cutaneous and muscular, the views of Horsley and Schäfer with reference to the limbic lobe were accepted in part. He believed that the evidence is becoming stronger every day in favor of the existence of a zone for the sensations of touch, pain, and temperature separate from cortical motor areas. Collections of cases, such as those of Starr, Petrina and others, which were supposed to indicate that the sensory areas coincide largely with those of motion, were not regarded as overcoming the positive evidence of decided destructive lesions of the cortical motor zone without any sensory disturbance. From a study of his personal cases, he had concluded that they did not support the doctrine that the motor and sensory areas coincide. Notes of these cases were given and also cases from other reporters. He believed with Bechterew that the loss of sensation in animals which have had the motor area destroyed was apparent and not real. Some light had been thrown upon this disputed question by careful examination of patients after operation, particularly when certain cortical areas had been clearly excised. Reference was made to the cases of Horsley, Weir and Seguin, Lloyd and Deaver, and others. The speaker believed that these observations and experiments pointed clearly to the theory that the motor zones are motor alone in function. His view was that the region for general sensation, including touch, pain, temperature and perhaps pressure, location and muscular sense could be divided into

special areas for the various distinct portions of the body, and that these centres lay alongside and had close anatomical and morphological relations with corresponding motor centres, but that they were not identical with them. He located these sensory areas in the gyrus fornicatus, the hippocampal gyrus, the precuneus, and the lateral postero-parietal region. The practical conclusion was that the neurologist and surgeon must depend upon motor symptoms alone in fixing the site for operation in cases in which the motor lesions are definite. When positive sensory symptoms are present, they may sometimes serve to aid in locating more exactly the position for operation, but the data are not sufficient for positive reliance. The question of morphological peculiarities of the human brain was briefly alluded to as having some practical bearing upon the subject under discussion. The position of the so-called angular gyrus and aberrations in the parieto-occipital region were more particularly discussed. Even the fissure of Sylvius, the central and the parieto-occipital fissures sometimes present considerable variation, but, as a rule, such aberrations are not confusing in operating on the motor region after the method of Broca, Thane and others. Dr. Mills concluded by saying that the discoveries in cerebral localization with the achievements in antiseptic surgery constitute the greatest triumphs which adorn the history of the noble science and art of medicine.

DR. ROSWELL PARK of Buffalo spoke as to the surgical aspect of the subject, and omitted consideration of those cases in which operation is dictated by a study of the subjective rather than of the objective features.

Cerebral topographical anatomy. The areas which most concern the surgeon are those which cluster around the fissure of Rolando. A few bony prominences deserve attention in this connection—that at the point of the nose known as the glabella, the external occipital protuberance, known also as the inion; the point of the vertex half way between these two—the bregma; the external angle of the orbit, the tip of the mastoid process and the lower border of the alveolar process of the upper jaw. The fissure of Rolando has its upper end about five centimetres

back of the bregma, but does not run quite in the middle line, its lower end lies about one-half centimetre behind the auriculo-bregmatic line and a little above an imaginary line projected backward from the superciliary ridge, thus the lower end of this fissure will be found about six centimetres above and a little behind the external auditory canal; or about an inch behind the bifurcation of the fissure of Sylvius. In regard to the convolutions, it must be stated that lesions of the dura mater overlying motor areas are not always to be distinguished from lesions in the cortex beneath. It is enough for the surgeon that a lesion of some kind can be located with reasonable accuracy. It matters not whether this is an old, irritative lesion; an acute suppurative process between the bone and the brain, or an abscess or tumor of the brain itself. The indication for exploration is just as strong in either case.

When and where can one trephine with safety? The safest rule is first to apply the trephine over those areas which do not overlie large vascular channels. Afterward the opening may be extended in any direction and to any required extent. The greatest hesitation is with regard to opening one of the sinuses. Two dangers attend such an accident, one fatal air embolism, the other profuse hemorrhage. The former danger is almost a theoretical one, and the other may be overcome by plugging the sinus, or closing its wound with a fine needle and suture.

Cerebral and cerebellar abscess. Bergmann has shown that abscess of the brain has but one result—death—and that the surgeon's knife offers the only relief. So far as we know there is no such thing as idiopathic abscess of the brain; it is always the result of some external wound of the head or some extension from diseased surrounding bone. The only exceptions to this statement are to be found in the case of pyæmic or tuberculous abscess. The symptoms of deep brain abscess may be divided into three groups according to causes: 1. Those which are inseparable from indications of suppuration. Such are those disturbances which may follow any deep-seated foreign body. 2. Symptoms of increased intracranial pressure and of disturbed relations. 3. Special symptoms by which the locality of the

disturbance may be ascertained. As long as the gray matter is undestroyed, the collection of pus may assume large dimensions, and still no intense motor symptoms appear. Local elevation of temperature over the abscess is a symptom of importance when present, but its absence need not negative a diagnosis, if made on other grounds. Wernicke has stated that there is a peculiar disturbance of speech which points to lesion of the temporal region. This is the confusion of correct with incorrect words. In the general diagnosis of cerebral abscess, it is to be remembered that there usually is a latent period which may continue for an indefinite period. The stage of active symptoms is usually ushered in by more or less headache; slight rise in temperature; local or motor symptoms can only be expected when the abscess is in the motor area of the brain.

In operating for abscess of the brain, operators, until recently, have satisfied themselves with incising the dura and doing nothing more. With the introduction of aspirating methods, the hollow needle came to be used for brain exploration. The dangers of this procedure are certainly small. The danger of hemorrhage has been over-estimated. A temporary tampon will control deep hemorrhage, while, in bleeding from the pia mater, the vessels may be secured with ligatures or *serre-fines*. In brain abscess consequent upon middle ear disease the best point to trephine, according to Bergmann, is above and behind the ear. Macewen proposes a second counter-opening on a level with the floor of the abscess.

Brain tumors. The principal features of these growths which produce symptoms are location, size, character, rapidity and manner of growth, and extent to which they affect surrounding brain tissue. Considered in their surgical relations, we may, with Bergmann, divide them into (*a*) the circumscribed or encapsulated, and (*b*) the infiltrated or diffuse, around which, as a rule, there is a zone of softening. A third class may be mentioned, *i.e.*, those growing from the interior of the cranium, from the bone or dura. If a reasonably satisfactory diagnosis can be made, it must be, indeed, an extensive growth of the cranial vault which shall contraindicate operation. The question what

and how many brain tumors are operable has been best answered by White. He found in one hundred brain tumors met with in the dead-room of Guy's Hospital that only nine could have been removed—one tuberculous nodule, four sarcomas, two undetermined tumors, one cyst, and one myxoma. Nine per cent. could have been attacked, providing a fairly accurate diagnosis had been made. Of these nine tumors, five were located in the cerebellum, one in the frontal lobe, and one in the extremity of the occipital. It is doubtful whether these seven could have been recognized accurately enough during life to justify operation; while the myxoma was impossible to diagnosticate. It is thus seen that by no means all tumors which can be diagnosticated can be deemed suitable for operation.

Operation for intracranial tumors. The head should be shaved two or three days before operation, washed with green soap and ether, and antiseptic compressors applied. Chloroform should be, as a rule, the anæsthetic, on account of its contracting influence on the vessels of the brain. Morphia, hypodermatically, and ergot may be resorted to for the same purpose. The author suggested that, after localizing the lesion, a small, disinfected headless tack be driven through the scalp into the bone at the point determined upon. After the dissection of the external flap this will point out accurately the point to be first attacked. In order to prevent hemorrhage the author had found a spray of antipyrin solution (1 to 40) of service. The semi-lunar flap is the proper shaped one to raise. Its apex should be in such a position as to allow of drainage with the patient on his back. The periosteum should preferably be raised with the flap. The use of the trephine is preferable to the hammer and chisel. Since Macewen has taught us how to preserve the fragments of bone and restore them to their place, his method has been widely tried and universally commended. The dura mater should be incised around a large part of the area at a distance of one-eighth to one-quarter of an inch from the edge of the bone. The appearance of the dura is sometimes a guide to trouble beneath. In recent cases it is sometimes highly vascular, in old cases it may be yellowish or discolored. Whenever adherent it should

be freely excised. Horsley claims that marked protrusion of the dura indicates pathological intracranial tension. The color of the brain should be noted, remembering that the cerebellum has normally a different appearance from the cerebrum. Sometimes, where there is uncertainty as to which convolution is the desired one, the battery may be employed. When no indication of lesion is found, further exploration may be conducted with a small aspirating needle or a blunt probe.

Should a tumor be discovered, the incisions for its removal should be made perpendicularly to the cortex for the purpose of avoiding hemorrhage and division of the conducting fibres. Removal of a layer of cortex, whether normal or abnormal, does not leave, as one might fear, a prominent gap with vertical sides, since, in a short time, the depressed portion is made to bulge almost to the level of the intact parts surrounding. In addition the cut edges are also slightly everted, and, if less brain is removed than bone, the edges are extruded into the opening in the skull; thus there is a continual normal tendency to hernia. Bergmann and others have shown that this tendency to hernia cerebri is in inverse ratio to the area of bone removed. Experience has taught that it is wise to remove brain tissue to an extent greater than was at first considered justifiable. In all operations or epilepsy the portions of cortex nearest the evident lesion should be freely removed. The matter of drainage must be determined according to the circumstances of the case. An abscess must be drained as long as pus is discharged. After the antiseptic removal of a tumor, the cavity should seldom be drained for more than twenty-four hours. The provision for drainage may be removed on the second day, and the wound dressed with reasonable pressure over the flap. Exudation naturally collecting in this cavity will be retained and will give rise to some pain and disturbance, but so long as the symptoms from this are not severe, the wound may be left with confidence that the fluid will be reabsorbed, and that the pressure will be the best check to protrusion.

Dangers of the operation. The principal immediate dangers are two—hemorrhage and œdema. Hemorrhage from the pia

or from the brain substance is usually readily controlled, but disastrous hemorrhage may occur from unexpected sources. When there is bleeding, a temporary tampon of iodoform gauze may be applied. The dural and skin flaps are laid over this, and an absorbent dressing applied. At the end of forty-eight hours this may be removed and sutures inserted. The second danger, that of acute brain oedema, may be brought about either by increase of intra-arterial pressure or by obstruction of the venous channels of escape. Under this accumulation the brain becomes more sodden. Removal of a portion of the cranium is virtually a diminution of the pressure normally exercised on its contents and is often followed by reaction with production of excess of fluid.

He had collected reports of 63 cases which were presented in summary and tabular form; 17 of these terminated fatally, although only 5 of these deaths could properly be attributed to the operation; 15 of the cases were abscesses, subdural or sub-cortical. In 11 cases the lesion was a tumor, exclusive of tubercular nodules. Of cysts, properly speaking, there were 12. The 25 other cases were of a miscellaneous nature. In 3 cases, the true character of the lesion was not revealed during the operation, and was only discovered at the autopsy. In 2 cases, in which no palpable or visible lesion was discovered at the time of operating, the symptoms which led to the performance of the operation were nevertheless relieved, though nothing but careful exploration was practised. Of the 63 operations, 17 were performed by American surgeons. Those who have themselves operated more than once are, with the number of their operations, Macewen, 12; Horsley, 11; Bergmann, 4; Weir, 3; Keen, 3; and Park, 3.

DR. D. FERRIER of London said he had listened in common with every one else in the room with the very greatest pleasure and profit to the extremely able papers which have been read before the Congress, and in which were so clearly expounded the principles of cerebral localization and of the surgical treatment of cerebral disease. He took especial personal pride in the fact that the question of cerebral localization and its practical appli-

cation had been assigned a very important place in this gathering of the profession of America. It had been for many years a cherished idea with him, long before it had taken any definite shape or crystallization, that the accurate determination of the functions of the brain would in time lead to the successful treatment, by surgical means, of the most distressing ailments to which our fellow-creatures are subject. Regarding the results of his experiments upon monkeys and other animals, he sounded several of his surgical colleagues with a view to obtain from them assistance in cases which he thought might be the subject of successful surgical procedure, but received little encouragement from them. He was told that men were not monkeys, though they may be descended from them. About five years ago, at a meeting of the Medico-Chirurgical Society of London, he ventured more boldly to advocate the surgical treatment of cerebral disease, but he was honored with a denunciatory leading article in the *Lancet*, and thought this was so curious that he took note of it at the time. If one bears in mind the brilliant results of Macewen, Horsley, Keen, Weir and others, he thought he would see that cerebral surgery has amply vindicated itself as a justifiable branch of the art of surgery. When we consider the numerous cases of tumor that have been successfully removed, of abscesses evacuated, of epilepsy permanently cured by surgical procedure and in cases which have been clearly indicated from the localizing symptoms alone, then he thought one would say there is likely to be a great future before the cerebral surgery of to-day. He thought, however, we must be cautious, because in our newborn enthusiasm we may be apt to do things our better judgment and larger experience may not consider justifiable. He did not think the dangers of cerebral surgery to be altogether due to septic inflammation. There have been cases which have not been successful. He has seen several of these that have occurred in his own practice. That, however, is not more than is true of any great surgical operation. He thought that the cases of recovery are distinctly much larger in proportion than those in which evil results have followed. He confessed that in some respects he had been disappointed in re-

gard to some of the cases. He alluded more particularly to those cases which Dr. Mills referred to as being the subjects of Jacksonian epilepsy. In these cases we have reason to believe there has been an irritative lesion directly localized in a definite portion of the brain. Cases of this kind have been operated upon, the discharging lesion has been removed, and certain cases have been permanently cured. Nevertheless, from the fact that some have recovered, he thought it would be well to give the patient at least the benefit of the doubt. In endeavoring to cure our patient we may also inflict a greater evil, and he himself shared very largely Mr. Macewen's opinion that to render a patient hemiplegic would be a very questionable cure for unilateral convulsions. There is still a good deal of work to be done both in regard to determine the function of the brain and also in determining the accurate diagnosis of cerebral disease. We know now a great deal more than was known a few years ago, but still there are regions which are practically to us a *terra incognita*, and it will require much laborious work before we can say we have gained a thorough knowledge of the functions of the brain. There are a good many differences still prevailing among those who believe thoroughly in the doctrine of localization in regard to the exact limits of the region supposed to be endowed with specific functions. These differences are regarded by the opponents of localization as signs of a divided household. He did not think so. He regards them as signs of healthy activity. They are only family jars. As there were several speakers to come after him, who were to address the Congress this evening, and particularly his distinguished colleague, Mr. Horsley, who has done so much for cerebral surgery, he would no longer trespass upon the patience of the audience, but would thank them for their very great reception of this evening with which they had favored him.

MR. HORSLEY remarked that in the course of what he had to say he should have occasion to refer to numerous experiments. These experiments have been performed by himself in conjunction with other observers, and therefore when he referred to them as his own work he wished they should understand that he was

simply the spokesman of his colleagues, Prof. Schäfer, Beevor, Gotch, and Dr. Semon. The subject is so enormous, he was at the greatest difficulty to know in what way he could be of any service to the meeting. It occurred to him that he had better take up a distinct line and give in detail, so far as he was aware, the latest points that have occurred in that line. He would therefore give some facts and ask them to take on trust the observations on which these facts in a great measure rest. He would confine his remarks entirely to that region which Prof. Ferrier was the first to map out, viz., the so-called motor region. He believed that in the so-called motor region they had three functions clearly represented: 1. Slight tactile sensation. 2. The so-called muscular sense. 3. Movement. He would ask them to remember the yet more fundamental principles which underlie our information on this subject. They must understand that these three functions are wrapped up closely together, and that in each particle of the cortex there are represented all the segments of the body in a varying degree. If they adopt the views of Dr. Hughlings Jackson, of course they all believe that in the corpuscles of the fourth layer is the seat of representation movement. It seemed to him that they cannot refuse to believe that the small corpuscles are similarly the seat of representations of 1 and 2—i.e., sensory representations. The evidence upon which this belief is founded is to be found in experimental evidence and clinical observations. Facts of this kind he has published at length. Passing from the representation of a tactile and muscular sense, he would say a word or two upon the needs of representation of movement in this so-called motor cortex. It seemed they must consider this very closely if they were to gain an accurate knowledge of the representation of the different segments of the body. Prof. Ferrier was the first to give them a correct map of the representations of the face, arm and leg. Dr. Mills has stated that Prof. Schäfer and himself showed that the trunk was represented on the mesial surface of the hemisphere. Dr. Beevor and he believed it would be perfectly possible by laborious investigation to split up these centres very minutely. The method adopted was as follows: They divided

this so-called motor area into squares two millimetres in length, and they excited each square of the cortical surface with a very weak faradic current—in fact, the weakest stimulus that would produce any movement at all. He would illustrate the general result of the observation, and would take for that purpose the representation of the movement of the thumb. The representation of the thumb is focussed in front of the lower end of the intracranial sulcus, and it extends over a great deal of the upper limb area. This representation gradually diminishes in intensity of representation as we pass from the focus upward. The shoulder and the thumb form the two most important parts of the upper limb. The shoulder is represented in exactly the opposite part of the upper limb area to that of the thumb, and it conversely diminishes in intensity downward. The question of the limitation of the whole area of representation of any given segment is most important. Dr. Ferrier has always held that these areas are limited by hard and fast lines, and no one area trenches upon another. Unfortunately, he could not follow his honored teacher in this belief. He was perfectly sure these were what may be called border centres, and in one portion of the brain Dr. Ferrier himself drew attention to the fact that in one spot we have representation of the two limbs. The representation of the face at its upper border merges into the representation of the upper limb. So if they have a focal lesion at that spot there are two “signal” symptoms. For diagnostic purposes it is absolutely necessary for us to be aware of the relation of one focus to another. He would now turn to the question of the representation of the character of movement. Dr. Ferrier, in his monograph published in 1874, pointed out that in certain parts of the so-called motor region there were certain movements represented. Dr. Beevor and himself carried this further, and could trace gradation of representation of different movements. He would give two examples. At the upper part of the upper limb region extension of the elbow is represented, whereas in the lower part of the same region flexion is represented, and between the two there is confusion. This practically holds true of the various segments of the body. He would give one more example, which gives

him special pleasure. It is an example of the representation of extension of the wrist which Dr. Keen referred to in his cases before the Surgical Association. In his diagnosis he had figured the exact spot where, according to Dr. Beevor, extension of the wrist is most represented, that is the anterior border of the upper limb region. This point is specially interesting to them, because they are in a position to show that extension of the wrist must precede every fine movement of the limb. This brings to a conclusion what he had to say of representation of movement. The facts referred to as being observed by Dr. Beevor and himself are in harmony with the facts observed by Prof. Schäfer and himself. There are minute points of difference due to the species of monkey employed. During the past two years they had employed but one species of monkey.

He would now speak of cortical epilepsy. Cortical epilepsy consists of several stages; of a preliminary aura, then a tonic stage, then a latent period, then the clonic stage, and then, finally, the stage of exhaustion or paralysis. For five years he has been making observations respecting the possibility of finding out which of these kinds of spasms in a muscle are due to the cortex cerebri alone. Here they must look upon the convulsion from two points of view. The connection between the cortex and the spinal system is, of course, brought about by the pyramidal tract. Now, obviously, if they investigate the convulsed muscles by the ordinary graphic method, they should obtain a tracing, the uprising of which indicated the tonic stage, then a pause and a fall; then little waves to indicate the clonic convulsions which succeeded the tonic stages. It might be thought the whole of these convulsions was due to the cortex, or the tonic stage to the cortex alone and the clonic to the spinal alone. Gotch and he had found it possible to tap the motor tract in the dorsal region and then to stimulate the cortex and measure with a very delicate electrometer changes in the pyramidal tract. The variations indicate the impulses coming down from the cortex streaming down the pyramidal tract. It is perfectly justifiable to assume that these variations exactly correspond with the nerve impulse. Of course, they know nothing of nerve energy

itself except its speed of transmission. Therefore they investigate its character by means of the concomitant negative variations which attend the passage of nerve impulses. They had thus found that the whole of the character of the convulsion is entirely due to the cortex; with this electrometer it is possible to photograph a record, and the photographed record is given under the graphic record on this diagram. And they can see they correspond in character.

He would now conclude with a few remarks upon the so-called practical part of the subject—he meant cerebral surgery. There are a few points of special character, and to these he would allude. He had nothing to add on the subject of his previous papers. The bone is marked with a fine drill through the scalp. He would urge the cutting out of a piece of bone by an inch drill. Then quickly, with a circular saw, open a large area by almost cutting through the skull, then with a brim forceps quickly cut away the area marked out. Before, of course, such forceps are applied to the skull it is best to separate the dura mater. The dura being exposed if we perform exploratory operations, it is, he thinks, a terrible thing for the patient if the dura is not opened. He was perfectly aware that the risk was greatly increased if care is not used in the preparation of antiseptics for the operation. With regard to faradism, this is a point upon which the activity of his American colleagues had gone further than in Europe. Many interesting practical points are to be gained from faradism of the cortex if it is exposed. He now passed on to hemorrhage. He believed the parenchymatous oozing may be stopped by the use of morphia and ergot, as Dr. Keen has suggested. But the ligature must always be applied, if possible. The wound should never be plugged, as it is disastrous to do so. The method of ligation is with catgut, applied by exactly even and gentle traction on the two ends so as to avoid cutting through or tearing the delicate vessel. He would refer to a source of regret in this kind of surgery, viz., the death of the patient. He would say that it is exceedingly dangerous to operate upon a patient who is under the influence of drugs, and especially the bromide of potassium. They should

endeavor, as far as possible, to take the patient from under influences of that sort. Another regrettable point is the failure of the object for which the operation was undertaken, viz., recurrence of the epilepsy. He believed this was almost invariably due to incomplete operations. Cases in which he had completely removed not only the lesion but also at least one centimetre of the surrounding brain substance remained free from epilepsy. The cases in which the epilepsy recurred, he did not remove, to his entire satisfaction, all the damaged brain substance around the lesion. The prognosis of a case after operation must be guarded. If we operate upon such cases, it must be early. He thought there was some danger of doing too much in certain cases. He believed, on the other hand, that they stood in considerable danger from statistics. In conclusion, he begged to thank the members for the very kind manner in which they had received him to-night, and also for the generous feeling of hospitality and friendship with which they greeted him on his visit to this country.

DR. KEEN of Philadelphia said that we distinguish in the body three cavities—the cavity of the head, the cavity of the chest, and the cavity common to the abdomen and pelvis. In the chest, abdomen and pelvis we recognize a large number of separate and distinct viscera with separate and distinct functions. We can investigate the diseases of each viscus and locate them according to the physical signs and the symptoms presented by the history of the case. Until very lately the head was regarded as a cavity containing one viscus acting in its entirety like the liver, spleen or kidney. If it were affected, we were not able to distinguish one part from the other, but in his opinion we ought to regard the brain cavity precisely as we regard the chest cavity or the abdominal cavity, as a cavity containing a number of viscera, fused physically but separate physiologically. If we recognize this fact that the head cavity is a cavity containing a number of viscera, and that each viscus has its appropriate function, we shall at once have a much clearer conception of the functions of the head and its viscera, and, therefore, of their diseases and injuries. He was very glad that a warning note had been sounded

to-night both by Dr. Ferrier and Mr. Horsley as to over-rashness. We are only just beginning to find out what operative surgery can do in the brain. We are in danger of very greatly overdoing it, while on the other hand we must be equally cautious in the other direction. We must take, in the head cavity, a warning and an encouragement from the history of the surgery of the abdominal cavity. The timidity with which surgeons approached the abdominal cavity was somewhat remarkable in the early days of abdominal surgery. Their boldness now is almost appalling, and the success equally gratifying. He was very glad to hear Dr. Parks to-night advocate exploratory operations. We must do with the head cavity just what we do with the viscera of the abdomen. We must sometimes open the abdominal cavity in a case of intestinal obstruction in order to make a diagnosis, and we must do so in the case of the head. We have all got to learn the limitations of operative interference from experience, and at present we have to make the experience. A very good illustration of this was furnished to him recently. A gentleman consulted him with reference to an intense headache in the back of the head, presumably the result of a fall. He called Dr. Mills and Dr. Oliver to examine the case, and they found no localizing symptoms. He declined to operate on the ground that he could find no localizing lesion. The patient afterward went to Dr. Weir. Dr. Weir trephined him, basing his operation on the point of the focus of the headache, and he cured his patient. He did not suppose Dr. Weir understood anything more about the nature of the trouble than he did, but he did better with his patient. This is a simple illustration of what boldness will sometimes accomplish.

DR. M. ALLEN STARR of New York said that it was evident, from the statements to which they had listened, that cerebral surgery has a great future, but that it is largely dependent upon neurology. The surgeon is ready to proceed when the neurologist can indicate the way. The responsibility for future progress rests with physicians. It is to be met by the careful observation of cases, their thorough examination, their collection and analysis; for it is by this method that progress has always been made in the past. The examination of cases has not always been com-

plete, and needs careful preparation. This was especially true of the cases assigned him for discussion, viz., disturbances of speech. In the history of aphasia there have been three epochs. First, that of Broca, when it was established that lesions in the posterior part of the third frontal convolution of the left side in right-handed and of the right side in left-handed persons caused aphasia. Secondly, the epoch of Wernicke, in which a broad distinction was made between motor aphasia, the variety described by Broca, and sensory or amnesic aphasia, the lesion of which Wernicke showed to be in the first temporal convolution. Thirdly, the epoch of Charcot. Charcot says "a word is a complexus; in it one can discover four distinct elements: the auditory memory-picture, by whose means we are able to grasp the sense of words heard; the visual memory-picture, which enables us to comprehend the words written or printed; and also two motor elements—that is to say, the motor memory of articulation and the motor memory of writing: the first developed by the repetition of movements of the tongue and lips necessary to pronounce a word; the second by the practice of motions of the hand and fingers necessary for writing." These memories, then, joined by association, form the mental substratum of language. But since they are distinct, each may be lost, while the others remain. The loss of visual memories results in word-blindness; the loss of auditory memories in word-deafness; the loss of motor memories respectively in agraphia and motor aphasia. Individuals differ widely in the development of various mental powers. Some remember things seen better than things heard, faces rather than names; others write down what they wish to remember. In these different persons aphasia presents different features; the student suffering more from word-blindness than the laborer. Each of these clinical distinctions has a pathological basis. Motor aphasia is due to lesion of Broca's centre, and this is easily accessible to the surgeon in case the disease is open to his interference. The lesion in agraphia is still undecided. The situation of the lesion causing word-deafness is in the first and second temporal convolutions in their posterior two-thirds. [A diagram was shown, on which all the cases of pure sensory aphasia hitherto

published were laid down (forty-three in number), and the situation of the lesion was shown.]

Word-blindness was also discussed, and shown to be due to a lesion in the angular gyrus. This symptom is often attended by psychical blindness, in which the patient can see but cannot recognize objects. The lesion in these cases is deep, involving the association fibres beneath the angular gyrus. It may be possible in future to select lesions of other association tracts beneath the cortex if cases are properly tested—such acts as repeating words after one another, copying, writing at dictation, involving the action of these tracts. Pure aphasia of any of these varieties is rare. The usual form is mixed aphasia, both sensory and motor elements of speech being affected. Here the lesion is in the Sylvian region, and involves both temporal and frontal lobes. Here it is accessible to surgical interference, and the indications are plain. For though we can no longer speak of the speech-centre, we can speak of the centres of motor and sensory and mixed aphasia, and each offers a sufficient guide to the surgeon, as definite as motor spasm or hemianopsia.

DR. ROBERT F. WEIR of New York said that he had been always very handsomely treated by physicians, and he had been very handsomely treated to-night by Dr. Keen. It had been his good fortune, commencing in 1883, to have practised what is now called brain surgery in ten instances—three times for tumors, three times for cerebral abscesses, twice for hemorrhage into the cerebrum where there was no external hemorrhage, once for epilepsy, and once for cerebral pain. His last case of brain surgery, which had been made the subject of a paper by Dr. Seguin and himself in the *American Journal of the Medical Sciences*, is exemplified in the brain he would pass around for inspection. This case illustrates a point of some importance. It was so deep that in exposing the brain they were within an ace of not recognizing the tumor. It was only detected after some difficulty, deep in the brain substance. Bergmann has stated that an operation for the removal of a brain tumor should not be undertaken, first, when the tumor is large; and, second, when the patient is in a state of coma. Dr. Keen removed a tumor over

four ounces in weight, and recovery took place. Mr. Horsley removed a four and a half ounce tumor from a man in a state of coma. So he thinks facts are at variance with this theory of Bergmann. In the first case of tumor upon which he operated there was an error of diagnosis. The brain was opened and no tumor found. The bone was replaced, the skin was fastened, as advised by Horsley, and the patient recovered. The headache disappeared altogether, paralysis improved, and the patient lived two months. Another case was reported by Mr. Heath of London, in which the tumor was attached to the bone at the base of the skull, and was not removed. The headache was relieved, paralysis improved, and epilepsy ceased for a time. In cases of hemorrhage threatening life his plan is to do the operation as an exploratory one, take away a portion of the skull, and if he finds the blood-clot remove it. He had gone over the brain a year and a half ago to see how much could be done in the way of surgery, to find out whether the longitudinal sinus and lateral sinus were things we could avoid. He found he could strip them up from the anterior surface of the skull to a goodly length. He had stripped the lateral sinus from its bed to a distance of about an inch. He had stripped up the dura upon a living subject in ear trouble to a distance of one and a half inches. He had been able to raise up the frontal sinus until the anterior glenoid processes were exposed. He had been able to feel the foramen magnum. He had recently tapped a cerebral abscess on the under surface of the sphenoid bone just anterior to the foramen rotundum and ovale, being led to these regions by necrosis. He believed one can reach very many portions of the brain providing our neurological friends give us information thereon.—(*Medical News.*)

BRITISH COLUMBIA MEDICAL COUNCIL.

The semi-annual meeting of the British Columbia Medical Council was held at Vancouver on the 6th and 7th of November. There were present Drs. Davie (Victoria), President; McGuigan (Vancouver), Vice-President; Milne (Victoria), Registrar; DeWolf Smith (Westminster) and Tunstall (Kamloops).

After the minutes of the previous meeting had been read and confirmed, the Registrar announced that there were five candidates for the license. Several unlicensed practitioners were reported from different parts of the Province, and the Registrar was instructed to put their cases in the hands of the solicitor to the Council. It was also reported that an alleged physician, calling himself Dr. Millar, in Vancouver, had been fined twice since the meeting of the Council in May last for practising without a license.

The examination of the candidates for the license was then proceeded with, and the results satisfying the Council, the Registrar was instructed to issue licenses to the following candidates : A. W. Pearse, Yale ; W. A. Richardson, Donald ; John T. Carroll, G. D. Johnson and W. Reinhardt, Vancouver.

After concluding some unimportant business, the Council adjourned to meet in Victoria on the first Tuesday in May, 1889.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Annual Meeting, October 5th, 1888.

JAMES PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

REPORTS OF OFFICERS.

The TREASURER (Dr. J. A. MacDonald) reported the finances of the Society to be satisfactory, the total receipts for the year being \$399.57 and the expenditure \$393.35 ; balance on hand \$6.22. The treasurer also reported that there were many subscriptions for the year still unpaid.

The SECRETARY (Dr. Ruttan) reported that 83 notices were issued for each meeting, the maximum attendance at any one meeting being 37, the minimum 17 ; the average attendance for the year 21.7. In all, 20 meetings were held and 15 new members elected.

The LIBRARIAN (Dr. T. D. Reed) made the following report : In the reading-room the following journals are received—

Weekly : London Lancet, British Medical Journal, New York Medical Record, and Philadelphia Medical News.

Monthly: American Journal Medical Sciences, American Journal of Obstetrics, London Practitioner, Canadian Practitioner, Canada Lancet, Montreal Medical Journal, and Canada Medical Record.

Quarterly: Asclepiad, London.

In the library we have a valuable series of the London Lancet, bound, from 1844 to 1888, for the first thirty-six years of which we are indebted to Dr. Fenwick; twenty-four volumes of the London Medical Gazette, from the same donor; the following journals, bound, from 1880 to 1888, British Medical, New York Medical Record, Philadelphia Medical News, Canada Medical and Surgical Journal, and Canada Medical Record.

A number of volumes of English, American and Canadian Medical Journals have been donated by Dr. Kennedy, amongst them the first volume of the Canada Medical Journal. This volume is valuable on account of its earliness, and is now quite scarce.

Total number of bound volumes, 155.

ELECTION OF OFFICERS.

The election of officers for the year 1888-9 resulted as follows:

President—Dr. Wm. Gardner.

1st Vice-President—Dr. G. E. Armstrong.

2nd Vice-President—Dr. F. Buller.

Secretary—Dr. R. F. Ruttan.

Treasurer—Dr. J. A. MacDonald.

Librarian—Dr. T. D. Reed.

Council—Drs. Geo. Ross, A. D. Blackader, and Jas. Stewart.

DR. LAFLEUR exhibited for Dr. Geo. Ross specimens from a case of perforating appendicitis. Report and discussion were deferred until next meeting.

Stated Meeting, October 19th, 1888.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

A Case of Perforating Appendicitis.—DR. GEO. ROSS gave the following history of the case:—On the 4th inst. I first saw A. M. in consultation with his medical attendant, who had first

seen him three days previously. He was a healthy lad of 17 years of age. I learned on inquiry that he always had perfectly good health, with the exception of some three or four attacks of so-called *colic* which had occurred within the past two or three years. These attacks, as described, were all very similar, and consisted of a somewhat sudden pain in the lower part of the abdomen and towards the *left* side, not very severe, and always soon relieved by a hot application and a mild anodyne; there was usually vomiting a few times. The following day a dose of castor oil was given, and then he appeared quite well again. He was never away from his work for more than two days from any of these attacks. In the intervals he suffered no digestive disturbance of any kind, the *æ*cal evacuations being quite regular and normal. Early on the morning of the 1st he awoke with violent pain across the belly, chiefly the middle zone, and towards the *left* iliac fossa. Vomiting soon occurred, and was several times repeated during the day. The attack was looked upon as the same as he had previously suffered from, and was treated in the same way. He was seen by Dr. B., who recognized peritonitis, and prescribed opium in moderate doses and poultices. The inflammation progressed, and when seen by us four days later his condition was as follows: Face of characteristic abdominal expression, but not specially anxious-looking; color good; complains of a good deal of pain in the lower part of the belly and to the left side; no pain upon the right side; flatulence is annoying and increases the pain; the abdomen is moderately distended, chiefly in its lower half; parietes very firm and resisting; tenderness, not exquisite, but well-marked, mostly in the hypogastric, umbilical and left iliac regions; pressure is better borne in the right iliac fossa than in almost any other part, and palpation of that region fails to detect any deep-seated fulness or resistance; vomiting is quite frequent, the ejecta being bile-stained fluids, sour-smelling, but without any bad odor; the bowels had been moved by enema the evening previous; pulse is frequent, 120, and weak, but of fair volume; temperature 98°F. (the temperature the day before had been 101°F.) The diagnosis lay between an acute obstruction and an acute peri-

tonitis, and I entirely favored the latter view, believing that obstruction could be readily excluded. The only question, then, was to decide, if possible, the cause of the peritonitis. The sudden onset and rapid progress of the case suggested perforation, and therefore our first thought was of an appendicitis. It will be observed that the history gave some support to this idea, the difficulty being that the pain had always been referred to the *left* side. This also was the situation of the pain and the greatest degree of tenderness. The ultimate diagnosis therefore was acute purulent peritonitis, which was an attack depending upon some previous disease in the lower portion of the abdomen—that this might be an appendicitis, but the evidence on this point was inconclusive. I gave it as my opinion that the boy would not live more than twenty-four hours if unrelieved, but I strongly advised opening the abdomen. I fully realized the fact that four days had already elapsed, and that the peritonitis was already very extensive, which rendered the chances of success very small. I believe, however, that it is maintained by operators of experience that the existence of general peritonitis is not a contra-indication to the operation, and the condition of the patient seemed to justify the attempt. I had him removed carefully in the ambulance to the hospital, where laparotomy was performed by Dr. Shepherd.

DR. SHEPHERD said that when he saw the case with Dr. Ross, the patient was in a very hopeless condition; he had a pulse of 150 and very weak; vomiting was continuous. There was no tenderness on deep pressure in the iliac region, nor was there any fulness. The only very painful point was a little below and to the left of the umbilicus. It was decided to give the patient the very small chance offered by operation. An incision some two inches long was made in the median line below the umbilicus and two fingers introduced; nothing could be felt but distended intestines, and the cæcum could not be reached, so the incision was enlarged and the hand introduced; no collapsed intestine could be felt, but quantities of lymph covered the intestines, and some fetid pus escaped from the wound; the right iliac region was explored, the appendix was felt hanging over the brim of the

pelvis, and was apparently normal, though somewhat distended. For purposes of further exploration some of the intestines were drawn out of the abdomen and the cavity washed out with hot water. A large quantity of pus and lymph was evacuated from the bottom of the pelvis. In order to return the distended intestine an incision was made in it to allow the gas to escape; this incision was closed by Lembert sutures. The abdominal wound was now closed, a glass drainage-tube being left at the lower end. At the end of the operation the boy was much collapsed and his pulse had failed markedly. He rallied somewhat, but died next morning. After the operation there was no more vomiting. An autopsy was made by Dr. Lafleur, who found that the cause of peritonitis was a perforation of the appendix. This appendix was found hanging over the brim of the pelvis, and it was in a gangrenous condition. It was folded up on itself, the perforation was situated within the fold, and could not be seen until the parts were dissected out; to the feel the appendix was normal. There was a great quantity of lymph on the intestines, and in the true pelvis the folds of intestines were glued together in every direction. Dr. Shepherd remarked that although he had examined the appendix at the time of the operation with his fingers, he had not seen it, and that this case taught him that in cases of general peritonitis the appendix should always be examined by sight, even if the history and symptoms of the case do not point to this part as being the origin of the affection. If the cæcum and appendix cannot be brought to the surface at the median incision, they should be examined through an incision made in the right iliac fossa. The position of the appendix, viz., pendent in the cavity of the pelvis, explained in this case the absence of local symptoms; although the pelvis was examined before operation per rectum, nothing was made out. He also remarked that these cases of perforating appendicitis in which the peritonitis was diffuse from the first, operation gave much less hope of cure than when there was from the outset a distinctively localized area of inflammation, characterized by the existence of a tumor.

Discussion.—DR. RODDICK asked if, in Dr. Shepherd's opinion,

anything could have been done had he been able to make a diagnosis.

DR. MILLS said the position of the appendix might account for the necrotic condition, since it was such as to cause reduction of the circulation and lead to strangulation.

DR. HERVEY of Calcutta, after being introduced by the President, made a few remarks on the objections to laparotomy prevalent among the natives of India. It was rare to get a native to undergo any new operation, and, unfortunately, as most of the laparotomies were undertaken in extremis, the mortality was very high, and a strong prejudice existed against it. He also related a case of perforation of the appendix caused by a lemon seed.

DR. ROSS strongly urged the necessity of early operation in these cases; he did not advise postponing operation beyond the third day. Cases are now reported where operation was performed within twenty-four hours. In this case, as the operation was not performed until after the fourth day, success could scarcely be hoped for.

DR. SHEPHERD, in answer to Dr. Roddick, said that had he made out the gangrenous condition of the appendix he would have ligatured and excised it, but he did not think the result would have been influenced even if the appendix had been excised.

(To be continued.)

—Dr. Joseph O'Dwyer, the originator of intubation of the larynx, has been appointed Professor of Diseases of Children in the New York Post-Graduate Medical School and Hospital.

—Dr. J. B. Gibson has resigned the position of superintendent of the Mary Fletcher Hospital, Burlington, Vt. We understand that he is about to remove to New York, having secured a position on the house staff of the New York Eye and Ear Infirmary.

—The first number of the *Maritime Medical News*, published bi-monthly at Halifax, N.S., has made its appearance. It is edited by Drs. D. A. Campbell and A. Morrow of Halifax, J. W. Daniel and L. C. Allison of St. John, N.B., and J. McLeod of Charlottetown, P.E.I. We wish this new venture every success.

THE
Montreal Medical Journal.

VOL. XVII.

DECEMBER, 1888.

No. 6.

MIXED ANÆSTHESIA.

Obalinski of Cracow speaks highly of anæsthesia induced by a combination of chloroform and cocaine. He maintains that when anæsthesia is induced by chloroform, it can be kept up by the administration of cocaine. The following is the method followed: after giving chloroform for a few minutes, until commencing general anæsthesia is noticed, a quantity of cocaine, varying from three-fourths to one grain, is injected into the tissues that are to be operated on. After the injection of cocaine no further chloroform is administered. After this method of anæsthesia such operations as amputation of the leg and thigh and herniotomy have been performed. It is claimed for this mixed anæsthesia that it is less dangerous than either pure chloroform or a mixture of chloroform and ether. Obalinski followed the above method in twenty-four cases, and always with satisfactory results.

THE BUILDING OF A UNIVERSITY.

In our pages will be found an abstract of a lecture delivered by Sir William Dawson on the "Foundation of McGill University." To our many readers, who are graduates of McGill, this will be pleasant reading. This interesting story shows how abundant is the return from the judicious outlay of money in general and professional education. Few legacies in this country have been more productive of good than that of the Hon. James McGill in founding the university which bears his name. Although McGill owes much to him, still it must be remembered

that there has been a numerous band of generous benefactors since his time.

Obituary.

PROF. HEINRICH VON BAMBERGER, M.D.—The death of Professor Bamberger removes from the Vienna Medical Faculty one of its ablest members. On the death of Oppolzer in 1872, Bamberger was called from Wurzburg to fill his place. In this position he attracted students and practitioners from all parts of the world, being noted for his great diagnostic skill. He was to the last an ardent student. It is only a few weeks since he published an article on ether as a cardiac stimulant.

HENRY B. SANDS, M.D.—The sudden death of Dr. Sands of New York, on the 18th ult., removes from our midst one of the ablest surgeons of the continent. For many years in the capacities of teacher and consultant, he has occupied a leading position among American surgeons. Although not an extensive contributor to surgical literature, yet what he did write was valuable.

J. W. PICKUP, M.D.—We regret to have to record the death of Dr. Pickup of Brockville. Dr. Pickup for a number of years occupied a prominent position as a medical practitioner in Eastern Ontario. He acquired his general and professional education in this city, receiving the degree of M.D. from McGill University in 1867. After his graduation he proceeded to London and Edinburgh, and for some time was a diligent hospital student. He obtained the diploma of the Royal College of Surgeons. On his return to Canada he was appointed Medical Superintendent of the Quebec Lunatic Asylum, a position which he filled with ability. After resigning his position in the asylum he practised for a few years in Pakenham, Ont. About ten years ago he removed to Brockville, where he was in active practice up to the beginning of his fatal illness. Dr. Pickup took a great interest in his profession. He was a good and earnest student, and his loss will be felt not only by his numerous patients, but also by a large circle of professional brethren.

Publisher's Department.

—Dr. Charles H. Merz, the House Physician to University Hospital at Cleveland, Ohio, April 25th, 1887, said: I have made use of *Papine* for some time past, both in hospital and private practice, and find it a most agreeable substitute for morphine and opium. It is the anodyne *par excellence*.

THE INTERNAL TREATMENT OF GONORRHOEA.—At a late meeting of the Berlin Medical Society, Dr. Posner stated that although what had been learned about the gonococcus was extremely interesting, it had not given us much that was practical so far as treatment was concerned. Local anti-bacterian treatment had not yet been followed by brilliant results, and to-day we treat gonorrhœa with the old remedies, and combat it especially with the various forms of injections. These injections are not valuable in that they destroy the gonococci, but because they cure the inflammation of the mucous membrane. Internal medicines act beneficially by passing off in the urine and cleaning out the urethra. Dr. Posner speaks highly of Sandal-wood oil, which has such a reputation in France. He has used it much, because he has become convinced that injections, although they work very well in some stages of gonorrhœa, still are not well supported by many patients, and may, indeed, act injuriously. From the speaker's observations he believes that many gonorrhœas which would get well of themselves under a suitable regime are often kept up artificially by injections. He had used the Santal-wood oil in fresh cases, and could state from his own observations that, under all circumstances, it exerted a better influence on the disease than copaiba or any other oleo-resinous balsams. In those complications of gonorrhœa in which we have to cease injections on account of epididymitis, cystitis, prostatitis, etc., this drug is greatly to be recommended. Dr. Posner had repeatedly observed cases of acute catarrh of the bladder, with bloody or turbid urine, improve considerably and the urine become clear after a few doses of the Sandal-wood oil. In old cases of cystitis and prostatitis it was also beneficial and always acted favorably in tenesmus of the bladder and cleared up the urine. In chronic gonorrhœa, less stress was laid upon its beneficial action, but much depended on the purity of the Sandal oil, many qualities of which are found in commerce. The best form he had used was the French preparation known as SANTAL MIDY, put up in elegant little capsules, which were easily taken and well supported. The patient took daily from ten to twelve of these capsules, each of which contains five drops of pure Sandal oil. The German oil in capsules did not agree with the patient, a little hydrochloric acid might be added to the doses, and to improve its taste, a few drops of oil of peppermint. Altogether, according to the speaker's idea, pure Sandal-wood oil was the most efficacious internal remedy at our disposal. These remarks were confirmed by Drs. Casper and Lubinsky, who found it most successful.—(*Deutsche Mediz. Zeitung*, July 1886.)

