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.

- ☐ 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.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE

MONTREAL MEDICAL JOURNAL.

VOL. XXI. SEPTEMBER, 1892. No. 3.

Original Communications.

ADDRESS IN SURGERY.

BY WILLIAM H. HINGSTON, M.D., LL.D., D.C.L.,

Surgeon-in-Chief to the Hotel Dieu, Montreal; Professor of Clinical Surgery in Laval University.

At the Annual Meeting of the British Medical Association, held at Nottingham, July, 1892.

ON SYNTHESIS IN SURGERY.

The feelings with which I rise to address so large and so distinguished an audience are a strange alloy of regret that I must needs fall short of my own desires; of confusion at finding that those to whom the same post of honourable duty has been entrusted in past years have left no branch of surgery untouched; and, more than all, of dread lest my beloved Canada should suffer in your estimation at the hands of one who wants not the will but the power to do her justice on this momentous occasion.

Permit me, in my country's name, to thank you in all sincerity for the compliment paid to her in inviting one of her children to your shores, and in assigning to him a position of such honour in your deliberations—a position hitherto reserved for the most eminent of your own land—a land teeming with all that is great and noble in our art. Let me assure you that Canada is not unmindful of this fresh token of your regard. She is, as you well know, most firmly attached to the parent State; she glories in your past, she is deeply interested in your future; your glory is her glory; your future is her future; and she is grateful for any thought of her in your councils,

especially where science is concerned, and where the common good of mankind is the object.

It was the desire, on our part, to be in closer touch with you which made it possible, last year, for that able and indefatigable worker, Mr. Ernest Hart, to successfully establish those more intimate relations which now so happily exist between members of our profession in the parent State and in the Canadian Dominion Mr. Hart passed quickly from Vancouver to Quebec, and at his touch Branches sprang as quickly into existence as beacon fires were once lit on the summits of your Welsh hills.

Coming, as I do, to the very apex of surgical art from the wide circumference of its base beyond the seas. it might appear bold were I to attempt, as we sometimes do in Canada, to pass in review the advances in our art during a certain period. There we are accustomed to glean from the United Kingdom, France, Germany and other countries the best fruits of their workers, and to place them before the profession, stamped, for the most part already, with the mark of your and of their approbation. But that would here be dangerous, for an address of that nature, however carefully prepared, nicely adjusted, thoroughly combed down, complete and fashioned in all its parts when leaving the western hemisphere, might, on its arrival here, be found to be wanting in the most recent of its important features—features with which you, in the meantime, might have become familiar,—for the advances in our art excel in speed, sometimes, the swiftness of ocean travel.

It has been found by some of my predecessors in this rostrum that the advances in surgery have been so great and so important that to follow them at all closely in their many ramifications would be impossible. This difficulty seems to have occurred to my immediate predecessor, the learned Edinburgh surgeon, and, in his admirable address, he turned at once, and for relief as it were, to surgical rest. But the rest, aptly termed surgical, for which Professor Chiene, following Mr. Hilton, had secured so much attention, was objective. It seems to me that with this much-needed surgical rest there runs *pari passu* a surgical unrest which is subjective, and which will be my text for a moment.

On this the eastern side of the Atlantic, where, in every

branch of commerce, in every trade and handicraft, in every liberal art, in every learned profession, the lines which divide the work to be done by each are, for the most part, clearly and distinctly traced, the ceaseless agitation of life is marvellous, and would seem to favour the view long ago expressed by De Quincey that solitude was, even in his time, becoming a visionary idea in this country. Yet to me, a visitor, it appears life here is calm, quiet, placid when compared with that on the western continent. Here there is time for easy and familiar intercourse; there it is grudgingly given. Here you leisurely perform the functions necessary for the repair of wasted tissue, and the reception of food, recreation and sleep have each their due time allotted to them; there they are unduly curtailed as things which might be realized and converted into currency. This state of unrest everywhere—but especially in the western world—is not favourable to the surgeon, the full capabilities of whose intellect are not unfolded without sufficient occasional leisure and thought and retirement, all of which are, in some measure, denied to him in our new and over-active world. With you, as with us—but, as it seems to me, not so much with you as with us—the average surgeon of to-day is less a man of thought than a man of action. He is constantly liable to disturbance, either from the particular character of his calling, or from the agitation of all around him, of which he soon partakes. He is made to eschew the more meditative habits which would the better fit him to weigh well and to adopt or reject what should be adopted or rejected, without reference to authority, or without being swayed by the influence, not always safe and reliable, of superiority of position or of condition.

Perhaps at no time in the history of our art have the facilities been greater everywhere than they are at present of arriving at conclusions which may not be sound, and of being misled by representations which may not be strictly true. In the few intellectual centres, in ancient times, opinion was gradually formed in solitude. It advanced in regular progression, and from mouth to mouth, as it were. To-day, with steam and electricity and the wondrous and unceasing development therefrom of vast physical agencies, men are brought nearer to each other. Truth to-day, travels with the speed of lightning; but error also, and with like rapidity. Opinion, formed in

large centres, acts especially on the imagination of those around, and more powerfully still, perhaps, of those at a distance. It does not always convince, but it impresses, and, to quote the words of a classical writer, it has the force of authority rather than of reason; and concurrence in it is not always an intelligent decision, but a more or less blind submission. Our minds are often misled by misrepresentations, and they remain misled till other and truer representations put them right again.

Surgical opinion, in an especial manner, is at first, and for some time, what seems to be thought by every one in general, and by some one, or perhaps no one, in particular. An opinion hurriedly expressed by eminent, or even prominent, or perhaps only self-beguiled authority is adopted; it is propagated; it becomes the opinion of the general body, and although we may have resisted the influence of the individual authority in the first instance, we finally succumb to the voice of that general body of which we are constituents—each part having, without perceiving it, perhaps, done its share in diffusing truth, it may be in extending error.

The views on surgical questions, expressed ere they have been fully considered; hasty reports of surgical cases, and premature records of surgical operations—especially if the operations have been bold and novel—when published within a few days of their performance, are often misleading. Had the publication of so-called successful cases in medical journals for its sole object the elicitation of truth, error in time would be of small moment.

The haste in publishing enables the operator to scatter reports of his "triumphs" broadcast over the land as a bid for further subjects for his skill. Is the journalist quite blameless in facilitating the premature publication of cases which had, it is true, left the hands of the surgeon or the surgical ward of a hospital, but only to terminate fatally in the hands of a medical practitioner or in a medical ward from the direct, though perhaps not immediate, result of surgical interference? Would that the tutelary deity who is supposed to preside over medical journalism might so ordain that there should be a little less hurry, a little less zeal in taking the public partially into one's confidence, and in publishing successes while they are yet problematical.

In every part of Great Britain error is quickly overtaken and corrected; not so in Canada—a country so vast that portions of it are nearer to Great Britain, to France and to Germany than they are to other portions of its own vast Dominion; and whence London or Paris or Vienna may be reached in less time than Toronto or Montreal. Errors reaching such distant and inaccessible portions of the world survive to do their mischief long after they have ceased to delude the minds of men in the larger centres.

In the steadily-increasing number of medical journals all over the world—some of them established in the interests of the public, some in the interests of the profession, some in the interests of a medical school, and not a few in the interests of some nostrum retailed for profit—in all these kinds and qualities America has her share. The exact number published it is difficult to arrive at.

The medical library in connection with the Surgeon-General's Office at Washington, which, under the able guidance of that marvellous worker, Dr. Billings, is unique in extent and completeness, receives 700 medical journals of all sorts a year. Of these, 30 are devoted to dentistry (15 of them from the United States), 38 to pharmacy (8 of these from the United States), 32 to veterinary medicine (2 from the United States), 22 to homœopathy (14 of these from the United States), 9 are eclectic, and all 9 are from the United States—leaving 121 for regular medicine for the United States. Journals on popular medicine are not included in the foregoing list. Some of the journals referred to are conducted with great ability, while a few reach a high level of excellence. Not infrequently, in articles inelegantly written and quaintly expressed, the mechanical genius of the people is conspicuously shown in a manner to command the attention of those more favourably circumstanced. Readers of the journals of both hemispheres have occasionally noticed in yours a greater precision in reporting cases and in stating facts than is generally met with in the western world. You do not so often indulge in unknown quantities, while dates and other circumstances are stated with greater fulness. I have noticed the same features in your discussions. An absence of that precision in America must not, however, be allowed to take from the value of a statement or

a report. It is due in great measure to the hurry and unrest, the variety of fatiguing work a surgeon is called upon to do, and the difficulty, even in cities, of having properly qualified clinical assistance. Outside of hospitals there are well-qualified nurses for the rich—their services are beyond the reach of the poor—and they append the temperature and pulse chart; but beyond this there is often no further record till the case is finally summed up by the surgeon, when the details of treatment are added.

Men of action who have left and are leaving the impress of their intellect in the more practical departments of our art are often obliged to search in their visiting list or their day-book, where the more methodical and leisurely arrangement of your work enables you to be more precise.

Sometimes the facts are drawn from memory and, for all that is essential, correctly drawn, though dates and other precise circumstances are often wanting. It is from this hurried manner of reporting cases that doubt is sometimes felt of their credibility when given without reference to minor parts which are not considered essential to their truth. The older members of this Association can recall how the statement was received from America, some years ago, that a crowbar had been driven through a man's skull without killing him, and how brain matter had been found adherent to the strong bar of iron at a distance of many feet. The number of feet was not given (I cannot give it now), but the statement nevertheless was true, even without the lesser detail of distance.

Some of you will remember how little disposed many were to believe that a sponge probang, charged with solution of nitrate of silver, could be got beyond that watchful sentinel, the epiglottis, and be applied to the larynx. Who doubts it now? The same may be said of Sayre's assertion, discredited at the time, that after excision of the bones of the hip or knee, the joint could be so arranged that the little patient might be borne from one place to another without discomfort and without injury. Many of you have seen Sayre's work.

Were I disposed to dwell on American surgery I could greatly multiply instances of this kind, but that is not my purpose. I shall merely add that it must be apparent to readers on this side of the Atlantic, and to those who have visited the

western hemisphere, that the American surgeon arrives, in his own way and with marvellous celerity, at the chief points in a case—at its gist, its essence so to speak—by a process which may not be strictly logical, but which is rather of the nature of an intuitive intellectual judgment or perception. He seems to recognize truth, or something he takes to be truth, without the necessity of any elaborate process of ratiocination. This marked quality in the American mind renders him prone to eclecticism, not alone in medicine and surgery, but in philosophy, and even sometimes in matters of theology.

Though the principles of our art are independent of nationality, there are conditions peculiar to the different parts of the earth's surface which must be taken into account by surgeons and which to a greater or less degree modify practice. The relatively greater freedom from death which Valentine Mott, more than half a century ago, claimed for surgical operations performed in New York and Philadelphia, I claim, and more advisedly claim, for operations performed in the larger cities of Canada. The inflammations which sometimes follow surgical procedures with us are indeed accentuated, and are marked by much elevation of temperature; but the character of those inflammatory processes is of a simple sthenic type, and not of that irritable form which so often perplexes hospital surgeons in the larger centres of Europe.

The climate of Canada has much to do with this. In many parts of Great Britain mortality, from all causes, increases with the decrease of temperature; with us the reverse is the case. Our winter season, with the temperature of St. Petersburg, is the healthiest; spring and autumn come next in salubrity; while the largest mortality is in July and August, when the temperature is that of the same months in Paris. At certain seasons the atmosphere is so dry that the meat of the buffalo and the red deer, when cut into strips and dried in the open air, may be reduced to powder, forming the pemmican which often alone sustains the aborigine in his wanderings. When you add to this condition of climate the simple frugal habits of the people—well fed, well clothed, well housed—living in a land where, as in Longfellow's Acadie, "the richest are poor, and the poorest live in abundance," you have a sturdy, energetic race displaying much power of resiliency when their injuries demand the intervention of the surgeon.

It is, moreover, a people subject to few ailments, and these are of a sthenic inflammatory type. Thorough acclimatization is found to confer additional immunities. Those who can count the greater number of generations born in Canada are the healthier; while those undergoing the process of acclimatization do not suffer in the processive state. These remarks do not apply to the descendants of the aborigines who have been allied to the whites. The inflammatory affections met with in the Metis, whether of the French with the Huron or Iroquois, or of the Scotch with the Cree, are for the most part of a strumous type, presenting but few of the characteristics of those affections in either of the unmixed races.

Aneurysms are not common in Canada; chronic rheumatic arthritis is seldom met with; rickets, which the Germans still love to call, yet they cannot say why, the "Englische Krankheit," is scarce; strumous ophthalmia, which is so constantly seen in the hospitals of Vienna, London and Glasgow, is not frequent; and in cancer, especially of the breast, the glandular system is not generally primarily affected, affording thereby a fairer chance of freedom from early recurrence of this disease. (I allude to this disease advisedly, as I observe that some of your more distinguished surgeons recommend removal of the axillary glands in all cases of scirrhus of the breast—advice which, from my experience in Canada, I am not disposed to follow.)

There are no surgical diseases in Canada which have not their counterpart in every portion of Europe—two alone excepted. When, in the words of Milton,

> the parching air
> Burns frore, and cold performs the effect of fire,

frostbites are met with (among the non-acclimatized chiefly); and when snow covers the land, the *mal de raquette* is complained of by those who suddenly, and without preparation, are called upon to make long and hurried journeys on snow-shoes.

It is true that, on the eastern coast of New Brunswick, in Canada, a few lepers are met with in the lazaretto there; but the disease is not indigenous to the soil. Nearly a hundred years ago two shipwrecked sailors were cast ashore at a place called Tracadie. They were the subjects of leprosy. A French-Canadian woman gave them shelter. In washing their linen

she contracted that pitiless disease, and transmitted it to her children. These marrying, a small colony of lepers was formed. The number was at one time about seventy, but is now diminished to twenty-two, who are under the care of the Sisters of Charity from the Hôtel Dieu Hospital of Montreal. But outside the walls of the lazaretto there is no disease peculiar to the country.

In connection with this subject I may perhaps be permitted to quote the words I wrote some years ago, when dealing with this subject, in a work on the climate of Canada: "In considering the few diseases which, in Canada, afflict humanity, we have reason to be thankful to the All-Powerful Controller of the seasons as of our fate, that in separating us from the great branch of the European family, and in placing us where there are, indeed, no majestic ruins scattered around to prove past greatness or add to present interest, He has prepared for us a land where we may not only live in peace with all men, but in the assurance that no noxious exhalation will imprint its morbid impress on our countenance; that no pestilential effluvia will enter our veins; that no serpent will instil its fatal poison into our nostrils; that with our breath we shall draw no plague into our blood; and that, though he exposes us to much heat in our short summers and to a temperature in winter which pinches us till we cry out 'This is no flattery,' yet through our intelligence He keeps us in health, comfort and safety. More than once during my professional career I have endeavoured to map out one single disease or form of disease which we might claim as peculiarly our own, but so far I cannot boast of having made the discovery."

As acclimatization effects certain changes, it affords also certain immunities from which those not similarly circumstanced cannot expect to benefit. The acclimatized bear injuries well. Living in a simple primitive state, they require only occasional aid from the surgeon, and even less from the physician. Colonists, in thinly settled districts, sometimes send long distances for surgical aid in cases of hernia or dislocation. The *ramacheur*, or *rebouteur*, as he is styled, who is supposed to have an intuitive knowledge of broken bones, and how best to replace them, is often in requisition. In dislocations, however, these irregular practitioners are less fortunate. And although

their practice is invariably to find a small bone out of joint, which they incontinently proceed to reduce with an audible snap (of their own hidden thumb and finger, be it added), they do not attempt to reduce dislocations of the larger joints.

I once had a case of dislocation of the hip of fourteen weeks' standing brought to me a distance of fifteen hundred miles. It took six weeks of that time, after the *rebouteur* had done with the sufferer, for the patient to reach Montreal in a box like a closely-fitting coffin. The padding was so perfect that movement of either limb or body was thoroughly prevented during a rough journey.

Domestic surgery in civilised countries might in some things learn a little from the primitive methods of our aborigines. Take, as an instance, the treatment of the newborn infant. The yielding abdominal walls are never compressed by an unyielding bandage, and the young bird in its nest is not more comfortable than the Indian babe unencumbered by swaddling clothes. As the varied movements of respiration are not impeded, the infant cries but seldom. It never suffers from local troubles as the children of the whites often do. The urine is carried beyond the infant's person, if a male, by an ingenious mechanical support which directs the stream. Feculent matter is received into dry moss, which is to be found, in large quantities, in every wigwam where there is an infant.

If, in the depths of the forest, an Indian breaks his leg or arm, splints of softest material are at once improvised. Straight branches are cut, of uniform length and thickness. These are lined with down-like moss, or scrapings or shavings of wood; or with fine twigs interlaid with leaves, if in summer; or with the curled-up leaves of the evergreen cedar or hemlock, if in winter; and the whole is surrounded with withes of willow or osier, or young birch. Occasionally it is the soft but sufficiently unyielding bark of the poplar or the bass-wood. Sometimes, when near the marshy margin of our lakes or rivers, the wounded limb is afforded support with wild hay, or reeds of uniform length and thickness,

To carry a patient to his wigwam, or to an encampment, a stretcher is quickly made of four young saplings, interwoven at their upper ends, and on this elastic springy couch the injured man is borne away by his companions. When there are

but two persons, and an accident happens to one of them, two young trees of birch or beech or hickory are used. Their tops are allowed to remain to aid in diminishing the jolting caused by the inequalities of the ground. No London carriage maker ever constructed a spring which could better accomplish the purpose. A couple of cross bars preserve the saplings in position, and the bark of the elm or birch cut into broad bands and joined to either side forms an even bed. In this way an injured man is brought by his companion to a settlement, and often it has been found, on arrival, that the fractured bones are firmly united, and the limb is whole again. This is effected in less time than with the whites, for the reparative powers of these children of the forest are remarkable. In their plenitude of health, osseous matter is poured out in large quantity and firm union is soon effected.

[Dr. Hingston here showed the femur of an aborigine in which the osseous matter was so abundant as not only to unite the fracture, but to form a bed on which the tuberosity of the ischium was made to rest.]

The reparative power of the aborigines, when injured, is equalled by the wonderful stoicism with which they bear injuries, and inflict upon themselves severest tortures. They are accustomed to cut into abscesses with pointed flint; they light up a fire at a distance from the affected part (our counter-irritation); they amputate limbs with their hunting knives, checking the hemorrhage with heated stones, as surgeons were accustomed to do, in Europe, in the time of Ambroise Paré; and sometimes they amputate their own limbs with more *sang froid* than many young surgeons will display when operating on others. The stumps of limbs amputated in this primitive manner are well formed, for neatness is the characteristic of all the Indians' handiwork.

The aborigines are familiar with, and practise extensively, the use of warm fomentations. In every tribe, their old women are credited with the possession of a knowledge of local bathing with hot water, and of medicated decoctions. The herbs they use are known to a privileged few, and enhance the consideration in which their possessors are held.

The Turkish bath, in a simpler but not less effective form, is well known to them. If one of their tribe suffers from fever,

or from the effects of long exposure to cold, a steam bath is readily improvised. The tent of deer-skin is tightly closed; the patient is placed in one corner; heated stones are put near him, and on these water is poured till the confined air is saturated with vapour. Any degree of heat and any degree of moisture can be obtained in this way. Europeans often avail themselves of this powerful sudatory when suffering from rheumatism.

The aborigines have their herbs—a few, not many. They have their emetics and laxatives, astringents and emollients—all of which are proffered to the suffering without fee or reward.

The "Indian teas," "Indian balsams," and other Indian "cure-alls"—the virtues of which it sometimes takes columns of the daily journals to chronicle—are not theirs. To the white man is left this species of deception. The necromancing *medicine man* doubtless practises deception, but he is, in turn, impressed by the energy of his own incantations; and failure, on his part, to cure, exposes him to personal danger. This hurried allusion to the red man seems to me as if chanting his sad funeral dirge. He has been associated with a flora passing, nay, that has passed away. He represents a race much older than the races which have supplanted him, for did he not occupy this land ages before the Aryan race left its Asiatic home? He has, indeed, been supplanted in Canada, but he has been tenderly dealt with by us, as a minor, and with all a minor's rights. Treaties with him have always been honourably adhered to, and we have never qualified him (as he has been qualified by writers south of us) as useless lumber to be got out of the way.

In many parts of Canada, as in other countries not yet wholly covered by the flowing tide of civilisation, practitioners have to cope with difficulties unknown to those whose lines are cast in less primitive places. Now and then the surgeon of practical trend of mind has opportunity to turn that quality, essential in a new country, to advantage. I could, in illustration, relate many instances, but shall confine myself to one or two. My predecessor in the surgical clinic, the late Dr. Munro, an eminently practical surgeon, was travelling in a wild part of the country when he was asked to see a man suffering from retention of urine. Munro had no catheter with him; many

miles interposed between him and an instrument, and the roads were well-nigh impassable. He looked around the log cabin for something wherewith to enter the bladder, but saw nothing. He noticed, however, that the floor was cleanly swept, and that implied the use of a broom. He asked to see the broom. A corn broom was brought to him, and with it he soon entered the man's bladder. How? some will ask. With the handle? No. With the corn tops? No. He had noticed that the corn tops were bound to the handle with wire; this he quickly unrolled; made a loop at the free end; and as he unrolled he straightened the wire by putting his foot into the loop; bent a piece, gave the doubled end a slight curve, and passed it easily into the bladder. The free ends which remained without the body separated somewhat, and the pent up fluid passed between them.

[Dr. Hingston here showed the ingenious contrivance of a country practitioner, near Montreal, for enlarging an opening in the chest wall, which the inventor called a "thoraco-retrotome." Both blades cut equally on withdrawing the instrument, yet presented no cutting edge on entering.]

It is not always that the devices which were found to be successful in an emergency are put aside for something which might be better, though not so primitive. Some years ago I was present at a meeting of a medical society, not in Canada, it is true, but in one of the more western of the United States. A gentleman from one of the large centres had exhibited an instrument for removing foreign bodies from the nose. He extolled its advantages, was applauded, and everything promised well. I noticed, however, a smile on the faces of many present, when a small nervous man advanced somewhat briskly to the platform. I wish I could give you anything like a faithful sketch of his manner. His style was sharp, his language terse, and personal pronouns were used most sparingly. He commenced somewhat in this fashion: "Mr. President,—Much obliged to the gentleman from the city. Long distance for him to come to show us this instrument; long distance for us out here to send for one. Now, when called to see a child with a cherry or any other kind of stone, or a pea, or a bean, or a bead, or a button in his nose, not going to send all the way to the great city for this instrument, and for the professor to

come with it—for that's what it means. Can do without both. Wherever there's a boy with something in his nose that has no business to be there, there is sure to be a woman in the neighbourhood, and wherever there's a woman there's sure to be a hairpin. Now, with the boy and his nose and something in it, and the woman and her hairpin, and a live doctor and his jack-knife, nothing more is wanted. With the jack-knife half open, bend the double end, coax this bent end along the roof of the nose, raise the wrist a little and withdraw with the bent end well down, and if one of the child's toys is there it's sure to come. Would'nt give that instrument (he had made one while addressing us) for the instrument of the gentleman from the great city, and it don't cost as much money. There's not enough of *that* in the backwoods for the professor."

To return from this digression. Although allusion has been freely made to the primitive manner in which surgery is sometimes practised in Canada, it would be an error to conclude that such is by any means its general state. In the larger Canadian cities surgery, in every department, is pretty much what it is in the more favoured centres of Europe. There is, with us, as much refinement in diagnosis; as much dexterity and courage in performing surgical operations; and as much nicety in the technique. All the cavities of the body—brain, chest, and abdomen—have been explored, and the diseased organs operated upon. Canada follows Europe closely, very closely, in all her work. She has had the boldness—may she be pardoned!—to precede Europe in some departments of surgery. The tongue and lower jaw were first removed together in Canada; the innominate and the gluteal arteries were first ligatured there; and the credit of the first nephrectomy, which writers give so generally to Germany, belongs also to that country. But why should Canada be in any way behind? The better classes of her students, not content with receiving instruction in their own medical schools, pass one, two, and sometimes many years in Europe before commencing the practice of their profession in Canada. London, Dublin, Edinburgh, Paris, Vienna, Berlin are never without a contingent of young Canadian graduates, and, as you well know, many of our medical practitioners periodically visit Europe to add to their stock of acquirements and to renew the zest and relish of professional labour.

The medical schools of the country are modelled after your own. Their reputation for honest work is not unknown to you. The curriculum of medical studies is uniform and uniformly thorough.

In our universities, while the Chancellor is invested with jurisdiction over the members of the university, he has not the power to confer degrees in course upon anyone whose name is not furnished to him by one of the Faculties Degrees in Medicine are conferred upon certificate of the Dean or Master of the Faculty, stating that the candidate has been examined and found to be qualified.

In this respect our universities—Protestant as well as Catholic—are formed much on the model of the ancient University of Dublin, for which Clement V. gave a brief in the beginning of the fourteenth century. In all our medical schools clinical instruction holds a most important place. Hospitals are numerous, and the material at the disposal of the teacher is abundant.

The erection of hospitals has in later years been, with us, the work of individual effort and of private subscription. Hospitals are met with in all large cities in Canada, and sometimes even in the smaller towns. The last hospital erected in Montreal—the Victoria—is the munificent gift of two of her citizens. The first hospital—the Hotel Dieu—is the outcome of female love and heroism. The history of the latter is so strange, so unique, that I may be pardoned if I allude to it at length. When Jacques Cartier returned to France, after his discovery of Canada, the news of his exploit travelled over France as quickly as was then possible. A French girl, described as young and beautiful, became impressed with the thought that the newly-found country should be the scene of her labours. She succeeded, after a time, in fitting out a small barque, with money furnished by a Madame Bullion, and, with twelve sailors, crossed the Atlantic in the spring of 1641. The sea voyage to Quebec occupied three months—it can now be accomplished in one-fifteenth of that time. The journey from Quebec to Montreal by the St. Lawrence, which can now be performed in a night, then occupied eight days. Miss Mance's barque came to anchor at a projecting point off the island of Montreal, then called Hochelaga. Hochelaga was at

that time the *chef-lieu* of the war-like Hurons. They looked with amazement at the advent of pale-faced men and one pale-faced woman—for she was alone of her sex. They soon recovered from their surprise, however, and it was necessary for the colonists to throw up for their protection, as quickly as possible, wooden palisades on the land or rear approach; the big canoe, as the barque was styled, was a sufficiently imposing defence in front. If a colonist ventured beyond the palisades to gather fruit or berries, or to cut wood, he ran the risk of being pierced with arrows. Half of the first colonists perished in this manner, and Miss Mance was obliged to return to France in 1649, bringing back with her other recruits; and again in 1658, leaving France with twenty male and female recruits, half of whom died on the voyage of a form of plague. In their attacks on this small force some of the red men were wounded in return, and, when deserted by their comrades, they were brought within the palisades to what they and their tribe considered certain death—according to their own custom in warfare. They soon found the hospital to be a place of woman's tenderest solicitude. When the red man's wounds were healed a repast of dog's meat was prepared for him, and he was permitted to rejoin his tribe to tell what the pale-faced maiden had done for him. It need not surprise us to be told that n the presence of such devotion the warlike Huron soon forgot his ferocity.

A few years later it was necessary for the small colony to move a few hundred yards inland. Word went throughout the Huron Camp, and before the hour of departure the aborigines had strewn the ground with leaves and the branches of trees and with wild flowers, saying the earth was not fit to receive the tread of these women. In this way our first hospital was established, and in this way the light of Christianity was brought to the island of Montreal. Here is how the hospital has been sustained. Miss Mance had obtained from the French King a deed of gift in perpetuity of the small piece of land where she had landed, which, at that time, was valueless. It became, however, in the course of years, the centre of the village of Montreal, and eventually the commercial city clustered around it. A century and a third ago, when Canada passed from the rule of France to that of Great Britain, respect

was paid by the conqueror to the rights originally conferred by the French King, and the hospital, which at first had but the aborigines for inmates, continued to receive within its walls, as colonisation went on, persons of every succeeding nationality. For upwards of a hundred and fifty years after its foundation it alone afforded asylum to the sick and wounded of Montreal and westward. How many from these shores, when sick and disabled, have there received maternal care! How many of your children, in that then far-off land, had the pillow of death smoothed for them there, and without fee or pecuniary reward! And the same continues to this day; for the property preserved to those religious ladies by a wise conqueror has, without municipal aid or Governmental patronage, but with economy, sufficed for the wants of the institution.

Between the foundation of this, our first, and the Victoria, our last, hospital, other hospitals have been erected—chiefly the Montreal General Hospital, the Western, and the Notre Dame; and all that generosity on the part of the public, and zeal and ability on the part of the staff, can effect, are prodigally bestowed. Hospitals, some of them on a large scale, are now met with from the city of Quebec, where the oldest in Canada exists, to Manitoba, the most recent.

In my desire to place before you—and the occasion is so rare—a sketch of what relates to professional life in your greatest colony, I fear I am being beguiled beyond the reasonable and the considerate. I shall turn, and for a few moments, to that in which you in the Old World, and we in the New, have a common interest—the division of professional work. I should much wish to follow the various workers in their recent labours, and to include in general propositions the special work in which they are severally engaged. But the past few years have been so fruitful in bold and daring enterprise; surgery, both in its conservative and in its operative aspects, has made such amazing strides, that the task would be beyond the powers of anyone, even if time permitted. Yet the crude impressions of one *ultra mare* may, possibly, not be without interest to you.

There was a time, not yet in the far past, when the human body, in its entirety, came within the scope and purview of the medical practitioner. As the knowledge of cause and effect in medicine became more fully understood; as facts were

multiplied and methodically arranged; as the art of healing became so fully developed as almost to permit it to substitute its precepts, and rules, and directions for those principles which are fundamental, and which belong alone to science; and especially, when morbid anatomy opened a new and practically inexhaustible field of inquiry, many men gave themselves up, almost exclusively, to a particular branch or section of medical knowledge, and pursued it with such zeal and ardour —not always, perhaps, for the sake of knowledge, but sometimes (let us hope not often) for the sake of its productive application—that to synthetise and unite again under a common head parts which had been segregated now seems to be almost impossible, even were it advisable, and for two chief reasons:

1. When, in our profession, men of energy devote themselves to any branch of knowledge, and apply their minds thereto with continued attention, they cease to realise that, beyond and around them, there are other branches of our art which are of the same origin, which partake of the same nature, and which cannot be divorced from each other without mutual injury.

2. Although reputed pre-eminence in one department of surgery is admittedly a hindrance to advancement in any other department of the same art; and although pre-eminence narrows the horizon around the worker, and limits the scope and extent of his work; the one so cribbed and confined within those narrow limits, and who obtains pre-eminence within those limits, wins distinction and success more surely and more easily than one not so restricted. "The very narrowness of a man's claims," says a classical writer, "by making them definite and appreciable, is an advantage. The advantage lies in doing a thing which has a name, an appreciable name, and the narrower is the art, the more appreciable are the degrees of merit in that art." One so restricted, provided he excel in his narrow sphere, "will find himself a privileged man in comparison with the philosopher, or the very largest and amplest intellect that ever nature endowed or education expanded."

Now-a-days it is difficult for men, even of superior intellect and of liberal knowledge, to avoid being drifted away into one or other of the narrow rivulets leading from or flowing out of

the general mainstream of surgery, and becoming so absorbed in the pursuit of partial truth as not to perceive that it is wanting in many parts; that it is incomplete, unfinished and defective, and can only obtain wholeness when facts are arranged, and when phenomena, however distinct they may appear to be, are brought under a common law. No separate department of surgery, when isolated from its surroundings for the purpose of inquiry, can, of itself, become an art. I cannot emphasise this too strongly. It is only when the mode of reticulation of a part with parts around it is understood, that any particular or special object of pursuit in surgery can hope to be dignified with that name. Each part, each division, each subdivision—in a word, each specialty—is as the separate clauses in a sentence, which are essentially "architectural parts, aiding, relieving, supporting each other." As an illustration, let me take, for a moment, the real or fancied disturbances of the functions of certain organs often considered to be the most important of all the organs, compared to which, in the minds of some, the rest of the body (female I mean) is a mere appendage. In many places men have been bold, and in some places—notably in America—even reckless, in taking liberties with them, removing them, sometimes, as if they were of themselves particular or distinct entities, unconnected with, or uncontrolled by, and having little relation to, a thinking faculty of mind which readily receives impressions, which is easily affected by sensations, and which is quickly disturbed by emotions and passions. Has not quackery gained, has not poor woman lost, and has not our profession suffered in honour and dignity, by the refusal or neglect of the surgeon to seek for parallelisms and comparisons in other departments of the art? or perhaps, as it sometimes happens with uninformed minds, by the inability to consider any question by a process of mental abstraction, without which science—that is to say, knowledge of laws and principles, and the interdependence of truths—does not exist.

Is it not the tendency of many other departments or segments of our art to take a part for the whole, and to give to that part a width, an extent, to dwarf into littleness the limit or exterior line of all other departments? Gentlemen: The exclusion of what is cognate diminishes the value of what is

accepted in direct ratio to the value of what is excluded. As the process of analysis has gone on till we can scarcely expect to see it greatly extended, it may occur, it has occurred, to many to ask: Is it not time to hark back upon our course, and to see if—in the interests of the public as well as of our art—a more general synthetising is not desirable, when the approximation of parts which have been divided, and which have been recently kept so much asunder, should not be aimed at?

As long ago as the second decade of the present century, honest John Abernethy, in his remarkably practical essay on the Constitutional Origin and Treatment of Local Diseases, said an evil seemed to him to have arisen from the artificial division of the healing art into the medical and surgical departments. This division, says he, "has caused the attention of the physician and the surgeon to be too exclusively directed to these diseases, which custom has arbitrarily allotted to their care." But medicine, then, was one, and surgery was one. What would Abernethy say to-day, when each section of the human body is apportioned and allotted, and when, paradoxical as it may seem, each part is considered to be greater than the whole?

Whether such specialisation is a mixed or an unmixed good —and I shall not stop to discuss the question—it is the fact that the art of surgery is becoming more and still more divided into an ever-increasing number for special or particular branches of study or pursuit, each branch having its respective province or domain, which, it cannot be denied, is sometimes kept more distinct by an exaggerated estimate of its importance. Yet each must ever remain cognate to, and in close relationship with, every other department of the art, for there are no limits or boundaries to those various departments, and a seemingly intimate acquaintance with one, and a total nescience of others, are crass ignorance of all; for "all are but parts of one stupendous whole," as the poet puts it.

I hope this will not be understood by anyone as an expression of a desire to interfere with the pursuit of any particular course, however narrow it may appear to some, however vast to others. My desire is to *extend* the horizon of each, not to narrow it, by showing that all branches of our art are cognate

to each other. So long as there is division of labour, there must, indeed, be division of thought; but the narrow limits and boundaries which it is sought to establish must ever be prejudicial. Part is intimately connected with part, and a full knowledge of the functions of any part, and of its derangements, can be had only by those who have a general knowledge of the disposition and arrangement of other parts, and their countless and never-ending relations to one another in that wonderfully-constructed whole—this body which we inhabit.

In view of what has been said, I am impelled to ask: Has the candidate for admission to the study of surgery that mental outfit which would enable him to weigh well the facts and circumstances as they will be presented to him in professional life? Or is it not too frequently the case that his memory has been loaded—overloaded—with material, for the most part ill-digested, but with a minimum of knowledge worthy to be called liberal; and perhaps, withal, with an almost total lack of the power of logical inference, which is, as it were, the compass which guides the reason amid the treacherous currents of error to the truth? Memory, however retentive, and stored with facts however great in number, never, alone, in our profession, raised its possessor above mediocrity and maintained him there, save when the science of causes and principles was understood, and when philosophy could be invoked wherewith to analyse facts and to place them in relation to other facts which an irrational eye could not see, and which the unphilosophic mind could not understand. Of course I speak not here of genius, which is trammelled by no law save that which belongs to genius.

Never, perhaps, in the history of surgery has the necessity been greater than it is at present to furnish those who are to devote themselves to a cultivation of the art with an adequate mental outfit, to enable them to decide what surgical ailments are from their relations to other phenomena, and to recognise the "consent of the whole constitution with its parts and parts with other parts which may appear to be remote, but which can never be considered quite separately and without reference to an unfailing sympathy—continuous, contiguous, or remote." Accompanying each part or section of the art in its remotest, most intimate penetrail, the facts there gathered, the phe-

nomena there observed, are but segments or fragments of greater parts—of larger phenomena—which the logical mind alone can fairly interpret: for it alone can apprehend those facts and phenomena in their various bearings and relations, in their "strong connections, nice dependencies."

It is urged by those who know not, or who value but little, the advantages which a liberal education confers on its possessor, that it is remote from the use and tenour—the needs and occupations of life—and can be well dispensed with; that its utility is not apparent; that its profitableness is questionable. Looking at the question from a mere financial aspect—and that aspect obtrudes itself now-a-days into every question—it may be admitted that a liberal education may be fruitless in money-getting; it may be inconvenient at times, when men wish to be untrammelled in their interpretation of the duties of life, or may wish to act without reference to any standard of efficiency, or even of dignity. Such, however, can never be the point of view of the members of a profession which, though perhaps somewhat fallen from its high estate in these days of tradesmanlike arts, still claims to be considered "liberal."

Physicians and surgeons have, in every country and in every age, been amongst the most learned and the best informed. To-day the difficulty of preserving that distinction is greater than it formerly was. Education, at one time the privilege of the few, is now the possession of the many; and while the separation of professions and the division of labour tend to the perfection of art, according to Dr. Coppleston, the same learned authority adds: "But, although the art itself is advanced by this concentration of mind in its service, the individual who is confined to it goes back." Is not the conviction sometimes forced upon us that he was right?

It may seem strange to some of you that, coming from a country where schools are thought to be sparsely established, and schoolmasters not always easily procured, I should not wish to have the status of classical education lowered. On the contrary, we in Canada would say to you in Europe: Elevate the standard of classical attainments, and we raise it with you. Require from aspirants to professional honours that most extensive and varied knowledge which, for want of a better term, we call liberal, and we, too, shall demand it. (And here, let

me say, I mean by the term liberal knowledge, not classical alone, but something more than classical, though never without it.) Acting independently, every few years, as circumstances permit, we demand more and more of candidates who desire admission to the study of medicine. Within the last two months the Legislature of the Province of Quebec has—to English, French Latin, geography, history, arithmetic, algebra, geometry, *belles lettres* and physics—added philosophy, which, with us, always embraces logic and mental or moral ethics. This is a step in advance of many countries. As that science of sciences "includes, locates and connects, and uses all kinds and modes of knowledge," it will do much to hold together and keep under control every branch of our noble profession, whose members have, in every age, been amongst the most cultivated, and whose social influence—used commonly for good—it is beyond the power of man to measure.

SOME THOUGHTS ON MALIGNANT TUMOURS.*

By Thos. R. Dupuis, M.D., M.R.C.S. Eng.,
Professor of Clinical Surgery, R. C. P. & S., Kingston, Ont.

Mr. President and Gentlemen,—In presenting to you a few notes from my practice, my attention has been turned to the subject of malignant tumours. In many particulars their characters are not as well understood as could be wished, and the difficulty connected with their early diagnosis is familiar to all surgeons. Reference to this has recently been made by Dr. Bull, chairman of the surgical section at a meeting of the Academy of Medicine of New York (April 27th, 1891), and also by Dr. Satterthwaite in a paper on Sarcomata read before the same Society (Sept. 5th, 1891). But whether an earlier correct diagnosis would result in saving as many lives as might be wished, is a question that cannot now be definitely answered, for the weight of testimony seems in favour of the theory that malignant tumours have their origin in a morbid condition of the system that existed prior to their manifestation, but which is reacted upon and intensified by their development. Many

* Read before the Canadian Medical Association, at Montreal, September, 1891.

examples also seem to confirm the doctrine that they are at first purely local, but extend to distant points or become general by cell dissemination after their development. But whichever theory we adopt regarding them, we all know that malignant tumours display their malignancy in a somewhat similar manner, and ultimately affect the whole system, interfering with the general health and instituting new and kindred growths in various parts of the system. Time is, undoubtedly, one of the elements required for their fullest malignity, as they all become more virulent and invasive as they grow older; a young malignant tumour being apparently local in its implication and behaving itself similarly to a benign tumour. Two cases of sarcoma I may relate which seem to strengthen the last assumption.

A few years ago a farmer, 40 years of age, came to me with a tumour on his neck about as large as a walnut, and situated in the centre of the left occipital triangle. It was freely movable, non-adherent, and seemed as if it required only an incision in the skin to allow it to pop out without any difficulty. He ob-objected to any cutting, desiring, instead, "something to rub on." He practised rubbing on various substances for more than a year, coming to me occasionally and receiving the same advice, "have it removed without delay." At last, finding that it had recently grown more rapidly and attained a considerable size in spite of all he could do, he resolved to have it removed. I found it then nearly as large as a man's fist, passing forwards beneath the sterno-mastoid and burrowing down amongst the large vessels and nerves of the neck, ill-defined at its margins, and not movable independently of the tissues in which it was situated. It was plain that his chances for cure were reduced to a minimum; nevertheless, at his urgent solicitation, I undertook an operation for its removal, assisted by two other medical gentlemen of this city. The extensions and adhesions of the tumour were so great that its complete removal was impossible, and we had to content ourselves with removing what we could. The result was partial healing of the wound, a fungating growth from the portion left behind, extensive suppuration, and, in about three months, death. Microscopic examination of this tumour proved it to be a spindle-celled sarcoma.

Last spring, a blacksmith of about the same age as the preceding patient, came to me with a tumour in every clinical aspect similar to the previous one when it first came under my notice. I removed this at once, and easily, for there were no adhesions, the wound quickly healed, and there has yet been no sign of recurrence. This was also a spindle-celled sarcoma, but of the fibrifying variety. Whether this one would have assumed the same formidable character as the other did it is impossible to say; but my own opinion is that it would have done so.

The manner in which malignant tumours extend themselves is very suggestive. Cancer is proverbially a disease which proliferates by glandular infiltration through the lymphatics, while sarcoma is believed to follow the course of the blood; but I have seen cases of both in which the extension was by metastasis or by such a saturation of the system with the tumour poison that the slightest unusual irritation was sufficient to start a new focus of action.

Nevertheless, in spite of the foregoing facts, I am thoroughly convinced that many malignant tumours, if removed early, would never more be heard of, and the subjects of them would remain free from this dreaded disease unless some lesion occurred in them sufficient to again warm malignant activities into life. I could refer to a number of cases in which I would have operated with, I believe, a satisfactory result, but which, simply on account of being postponed too long, had passed beyond all hope of successful interference.

I have, however, removed several epitheliomata and scirrhi also, where the hope of cure looked very unpromising, but which, however, did not return, and from which the subjects were entirely relieved.

May it not be in such cases as these, that the patients had not that highly developed morbid tendency necessary for a recurrence of the growth, without again receiving some new malignant impression?

Twelve years ago a woman came to me with a large solid tumour in her left breast, which was at that time in a state of ulceration, and exhibited a very ugly appearance and foul smell.

She had already consulted one of the oldest and most reliable medical men of this city, and was informed by him that it was a cancer, and that her only hope lay in its immediate and complete removal. The following day I removed the entire growth and cut wide of the margin of the tumour. No enlarged glands could be found, and so no glands were removed. She was a thin woman, and the portion of skin taken away was so large that I had to make long incisions on both of two sides of the wound, and with the aid of these I could get the wound covered only with strips of skin, leaving open spaces between them. The patient recovered perfectly in a few weeks, and up to the present time she has had no signs of a return of her trouble, although she is now over 60 years of age.

The history of her tumour is as follows: About a year before coming to me she noticed a tumour in her breast about the size of a hickory nut. She showed it to the physician in her neighbourhood, who calmed her anxiety by telling her that it would not amount to anything, to rub on it some tincture of iodine, and watch it closely; and in case it increased in size, to have it removed. This she did, and as it began to enlarge and pain her, and had burst about six weeks before she came to me, she had it removed as stated. There was no gland affection in this case, and it was either not cancer, or, if cancer, the time had not been sufficient for gland-infiltration to take place. Every clinical symptom was that of cancer, but, unfortunately, I had no microscopic evidence to make its nature indisputable.

I have had a large experience in the removal of epitheliomata both by plasters and by the knife, and I have known very few, if any, to return if their extirpatien had been done early enough in their history.

We may for a few moments notice the dissemination of malignant tumours. It is generally held that cancers are carried to other points by the lymphatics and glands, and that sarcomata are diffused by the blood. There is another way, called metastasis, by which malignant tumours gain new positions. I will detail four cases in which the new growth seemed to have come from metastasis, although there might have been lymphatic-duct

conveyance of the morbid germs, or, rather, according to my view, such a profound infection of the system that slight variations from normality in another part or organ would start the neoplasm therein. Although scirrhus tumours are less liable to metastasis than the encephaloid and some other varieties, the cases I shall bring forward were evidently of the former kind.

CASE I.—I had amputated this lady's breast for a large, hard, painful tumour about six months previously to my seeing her for the last time. Healing was quick and satisfactory, and she considered herself cured for about four months. At the end of this time she began to get short of breath, easily tired out, more or less pain in her chest, and an occasional hacking cough without expectoration. After about six weeks of the foregoing symptoms, constantly increasing, I saw her in consultation, and found the whole left side of the chest dull on percussion and silent on auscultation, except the sound of the larger bronchi. She sank in about one week after I saw her.

CASE II.—This lady had been treated by a "cancer doctor" with a caustic application in the form of a plaster. The tumour of her breast had been removed, and her friends considered her in a fair way of recovering. She did not recover strength as expected, her breath became short, she could not sustain any exertion, and felt an oppression inside of her chest. I was called to her, and found a condition quite similar to that of case I. She gradually sank away, and in a short time died.

CASE III.—A woman with a large scirrhus tumour of the breast, whom I advised against any operation, as cure was out of the question, and relief would in all probability be for a very short time. She also went to a "cancer doctor" and had a plaster applied. A large hole was formed in her breast, but instead of healing going on as was expected, a large fungating sore was the result, the lungs became invaded, and death followed much in the same manner as in cases I. and II.

CASE IV.—This was a woman who had had her breast amputated in Montreal about eighteen months previous to coming under my care; recurrence had taken place, and she desired

me to apply a cancer plaster. Because nothing else would satisfy her, this was done ; a large mass was removed, but the morbid growth extended deeper and wider. Very soon symptoms of lung failure became apparent, and a course in most respects similar to the preceding three cases led her suddenly down to death.

In the foregoing cases it is now impossible to say whether the extension of the disease to new localities was due to continuity of tissue, by lymphatic conduction, or by a true metastasis, the last of which might readily occur on account of the saturation of the whole system with the cancer poison and the time necessary for such a result.

In support of the systemic contamination, I will relate the salient features of a case of melanotic sarcoma which occurred in the practice of Dr. Henderson of this city, and which he very kindly communicated to me. The patient was a lady 42 years of age, very good-looking, and in affluent circumstances. When she was first seen by him, July 15th, 1887, a dark-coloured mass about one inch in diameter was discovered a little below the spine of the right scapula, on the site of an old mole. It had been troubling her for about seven months, having begun to grow and feel tender immediately after the last parturition. At this time the margins were hard and slightly raised, and from the centre portion exuded a dark-coloured secretion. On account of the time it had been discharging (about five months), and of its being situated on the site of an old mole, Dr. H. considered it malignant, and at once removed it. On the 28th of the following January the doctor's attention was called to another tumour of the same kind, about as large as a hen's egg, below the site of the original one, and which had been noticed by the lady's nurse since a fortnight after the removal of the first. There were also at this time a small subcutaneous tumour below the right breast, and another the size of a pea on the anterior surface of the left forearm. The skin over these tumours was freely movable, and appeared perfectly normal. On the 30th of January these were removed, the wounds healing by first intention. Two weeks after this operation the glands in the right

axilla were found enlarged, and the whole of them were removed. Subsequently tumours continued to form in various parts of the body, and excision was resorted to till about sixty had been taken out. The base of the brain was invaded by the morbid growth and the third nerve implicated so that stasis and strabismus were added to the other unfavourable symptoms. This lady died from exhaustion within two years from the appearance of the first tumour. This case is a remarkable illustration of malignant sarcoma in which gland affection and dissemination through the blood-vessels were present. If not a distinct species of tumour itself, it certainly acted like a compound of both cancer and sarcoma; and one fact is here undeniable, and that is the peculiar tendency of the lady's system to the growth of this sort of tumours, without which I contend that such a development could never have taken place.

Everybody knows that persons afflicted with malignant tumours lose strength and body-weight more rapidly than the demands of the tumour on the system would seem to require, aside from any direct effect it might have upon the organs of nutrition when these are interfered with. Contemporaneously with the growth and development of a malignant tumour the health of its subject sinks below par; which is expressed by saying that there is a malignant-tumour cachexia, and that perfect health and a malignant tumour cannot exist in the same individual at the same time. The frequent recurrence after removal of all malignant tumours is another proof of the constitutional contamination attendant upon them.

Tumours occur on the site or at the edges of the scar where one has been removed; in the lymphatic glands connected with the tumour by lymphatic vessels; at irregular points, wherever the blood-currents may have carried and left the morbid germs.

What, now, is the ætiology of malignant tumours? Many theories have been advanced, none of which seem quite satisfactory, and it is devoutly to be wished that a satisfactory basis of agreement on their causes could be arrived at.

Some of the causes which have been enumerated by writers on tumours are the following: 1, Heredity. 2, The effects of

irritation and injury. 3, Physiological activity and decline in the body. 4, The "inclusion theory" of Cohnheim (embryonic hypothesis). 5, Certain articles of diet. 6, Unhygienic surroundings. 7, Infection.

In regard to the first—namely, heredity—I have never seen any cases which seemed in the least to favour this view. I have observed several cases in which tuberculosis in parents or relations has seemed to alternate with cancer in other members of the families, and *vice versâ*, but not directly transmitted.

The consequences of sudden injury or prolonged irritation have, in my experience, been prolific sources of malignant tumours, both sarcomatous and cancerous, although other observers have not been able to regard them as such.

Physiological activity and decline of the body may account for the origin of a few tumours, but there are many characters belonging to tumours which oppose this origin, as their heterogeneity, their occurrence in various conditions and at various periods of life.

The "inclusion theory" of Cohnheim, which defines a tumour as an "atypical new formation starting in a latent embryonic rudiment," is scarcely tenable except for a few homogeneous tumours of early life, or heterologous ones of later life, whose structures resembled tissues of an earlier stage of development. This theory has satisfied, better than any other, some of the requirements in the causation of tumours, and may for the present be still left under the domain of investigators.

Certain articles of diet have been accused of giving rise to tumours, as tomatoes for cancer.

Unhygienic surroundings has been taken into the catalogue of causes, and there is no doubt that such a condition promotes both the development and malignancy, whether it can prove their starting point or not.

Messrs. Shattock and Ballance are trying to prove that infection is the true cause. They regard cancer as a parasitic disease, and believe that the germs can be communicated from animal to animal. They aver that it has been transmitted from dog to dog and from rat to rat, but not yet from an animal of one species to

that of another. Nevertheless, whatever view we may take of the ætiology of malignant tumours, obscurity and conjecture limit our field of vision, and we are left to grope our way very much in the dark.

From 75 cases which I have been able to recall from the records of my own practice, and all of which have been personally cared for by myself, I have formed the following conclusions which I think are pretty well proved—namely, that there is required a predisposition in the body for the developing of malignant tumours, and, secondly, some source of irritation to excite this tendency into activity. Out of 25 cases of epithelial cancer which I have analysed, I find that nearly all of them followed the receipt of injury or irritation. Thirteen of them were directly traceable to smoking a short-stemmed pipe which delivered hot and pungent smoke always on the same spot. Three cases of the glans penis were undoubtedly due to retained smegma preputii caused by phymosis; several others followed on the site of warts which became irritated; one on the lower lip was due to the stroke of the end of a whip-lash and one to the blow of a small stone; and another case, one of cancer of the lower end of the œsophagus, was unquestionably due to the constant irritation of alcoholic liquors. The subject of it (one of our own profession) had been an incessant drinker for many years. For months before the malady manifested its presence, or in any-way began to interfere with his habits and pursuits, he became conscious of a failure of strength and body-weight which he could not refer to any known cause. Later on he began to experience a smarting and burning sensation in his throat after drinking anything strong, and to be troubled with symptoms in the lower part of his thorax which he thought due to bronchitis, because he was aware that several of his relations were phthisical. He continued to grow worse in every way, and died at the end of about a year and a half from the onset of his throat and chest troubles. A post-mortem examination revealed a cancerous condition of the lower third of the œsophagus, the greater portion of which was in a state of ulceration, and exhibited cancer nodules and thickening of the walls throughout the superior portion of the cardiac end of the stomach.

There may or may not be a sufficient foundation for considering heredity one of the predisposing causes of cancer, but here occurred a coincidence, to say the least of it, in the fact that not long after the death of the aforementioned patient I removed an adenoid cancer from one of the breasts of his oldest sister, a woman about 55 years of age.

I may take the opportunity here to add further that the father and two sisters of this couple had died from pulmonary consumption, and that since the period referred to, two others of the family have been victims of consumption.

Of another case of epithelioma enumerated in my list, of which tobacco-smoking was the exciting cause, the subject was one of a family amongst which five of his brothers and one uncle had perished from pulmonary consumption. This man had always been a heavy drinker, and was greatly in the habit of boasting of what whiskey had done for him—kept him, as he would say, from following his relations to the graveyard. He was a constant smoker as well as drinker, and always held his short pipe in the same position, so that the jet of smoke always impinged upon the same spot in his mouth. He told me that one day as he was enjoying his pipe he felt a sharp prick, like the sting of a bee, penetrate the point where the smoke "struck his mouth," as he expressed it; and so sudden and severe was it that he removed his pipe and felt the spot with his finger. A little tubercle about the size of a small shot was perceptible to the touch; he thought it of no significance, and paid no more attention to it at that time. However, the lump did not go away, but got larger, and soon became so painful when the smoke was allowed to strike upon it that he had to change the position of his pipe to the other side of his mouth. Suffice it to say that it grew and developed its malignancy rapidly, invading glands, destroying tissue, contaminating his system, interfering with nutrition, and finishing its ravages in death in fifteen or eighteen months from its first appearance.

These two cases seem to me worthy of note, because in two consumptive families, one male member of each was a steady drinker of alcoholic liquors; both escaped lung disease, but died at about the same age—55 years—of cancer.

Conversely, I attended a family some years ago, the father of which died from epithelioma, and nearly all the children were disposed to skin and gland diseases of one sort or another, and one of the daughters was decidedly phthisical.

These are suggestive examples, and may start a train of thought that may lead to profitable results. I cannot hold that the morbid entity of cancer is an allotropic condition of that of phthisis (to borrow a chemical expression), for of this I have not sufficient pooof; but I do hold that there is a constitutional fault underlying them both, and which seems to be, under certain circumstances, interchangeable when transmitted from parent to offspring.

With reference to several adenoid cancers, about twenty scirrhous cancers, and six or eight rodent ulcers, I have not time now to speak, further than to say that four of the rodent ulcers originated in a wart or mole of many years standing; two of the scirrhous tumours were directly traceable to a bruising of the parts whence they originated, and one followed on the products of an unresolved inflammation.

I have recalled the histories of about twenty sarcomata, amongst which all the four divisions of round-, spindle, mixed-, and giant-celled sarcomata have been found, including the varieties of osteo-sarcoma, periosteal sarcoma, fibro-sarcoma, chondro-sarcoma, and keloid, which is by some classed among the sarcomata to which it seems akin.

The most discouraging feature in the character of the sarcomata is their tendency to recur, not along the lymphatics or in the glands, or at the edges of the scar formed by removal of previous ones as the carcinomata are so prone to do, but at irregular and sometimes distant points, where the cells have been carried by the blood-vessels and nourished into activity by a predisposed condition of part or system. A few striking examples are all that I can inflict on your patience.

R. P., aged 22, had a tumour about as large as a small goose-egg at the upper part of the popliteal space. It was removed, and nothing could come out more cleanly and beautifully than it did. Healing by first intention rapidly followed. About six

months after the operation three tumours had made their appearance—one, two inches above the old scar, and the others situated at either side of this one, but a little lower down. These were removed in the same satisfactory manner, healing following immediately. Three months later patient presented himself again with the lower part of the thigh completely studded with tumours. Amputation of the thigh at the junction of the middle and upper thirds was practised; healing followed as usual. Within six weeks after leaving hospital he returned with the stump increased to double its normal size and consisting literally of a mass of tumours. He desired re-amputation, but was informed that it would be utterly useless. The mass continued to enlarge enormously, and in a few weeks he died from exhaustion.

A case of osteo-sarcoma in the head of the tibia came under my notice a few years ago. Amputation above the knee was practised; healing followed without delay, and himself and friends were rejoiced at his recovery and freedom from disease. About five months after the amputation the stump began to swell and the bone to increase in size, and unmistakeable signs of recurrence to manifest themselves. I was called to see him again, but could advise nothing, only to let him alone; this was done, and a few months after he died, wasted and exhausted from his sufferings, the stump meanwhile greatly enlarged.

A year ago last spring a beautiful young girl was brought to me with a tumour as large as a big goose-egg in the upper part of the popliteal space of the left leg. The tumour was red and the skin inflamed, and so deeply was it imbedded in the tissues that its removal looked to be a formidable operation. It was moveable, however, and hence I undertook its extirpation. It came out beautifully, having well defined walls and no attachments except the blood-vessels that nourished it. Healing was completed in two weeks, and the young lady returned to her home rejoicing. A few weeks after she went home she slipped and strained the parts where the scar was, and very shortly after she perceived a "hard lump" rising up just above the scar of the old cut. About six weeks after she was brought to me again with a tumour larger and more angry-looking than the

previous one, and, moreover, with the system greatly deteriorated from anxiety and suffering. The tumour had now assumed the hemorrhagic variety, and the whole limb was greatly swollen. Her strength rapidly failed, and in a few weeks death from exhaustion closed the scene. This was a case of small round-celled sarcoma with scarce a trace of fibrous tissue throughout its substance. We all know that recurrence in the manner described is the rule for sarcomata.

To my mind, it is plain that the system must be in some peculiar condition before any of these tumours can develop; and with the proper condition present their recurrence is a natural sequence. What that peculiar condition is it is not so easy to determine, and may be accounted the puzzle of the present time.

We know that wheat will not grow in a marsh, nor rushes on high, dry land. The soil must be conditioned to the seed that is to grow upon it or there will be no vegetation. So with the animal body, unless there is in it some pre-existent condition adequate to the growth and development of disease, disease cannot take place. A tumour must find the necessary conditions for a tumour before it can grow, and a sarcoma cannot play the rôle of a cancer. Now just what these conditions are in each particular case, and what will plant the germ that grows and develops into one or another of the various kinds of tumours, we are endeavouring to ascertain. I feel that I have thrown but very little light on the subject, nevertheless I believe I have indicated the course in which investigation must proceed to reach a satisfactory conclusion. While we seek for the germs of cancer and sarcoma, we must also seek for the peculiar condition of system in which they will mature, for we do not believe that, like the infecting germs of small-pox and syphilis, they will take root and flourish anywhere and everywhere they may chance to fall.

If I shall have provoked inquiry into this obscure corner of pathological science I shall feel that these imperfect histories and observations have not been made in vain.

Correspondence.

LETTER FROM BERLIN.

BERLIN, June 5th, 1892.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,—As I am now in Germany, specially interested in the gynæcology and obstetrics, and have been attending Professor Sänger's klinik at Leipzig, I thought that perhaps a few notes of what I have seen there may be of some interest to the younger members of the profession, who have not as yet seen his work.

I may begin by a short sketch of the professor's personal history. Sänger is a native of Bavaria, of Jewish parentage, about 39 years of age, and was for several years assistant to the late Professor Credé, and came into prominence chiefly owing to his great and original work in reference to the Cæsarian operation. In his first paper, published in 1882, Sänger studied fully the behaviour of the uterine wound in this operation, in order to form a basis for the correct principles governing its surgical treatment, by a suture adapted to the physiological peculiarities of the uterus. It is chiefly, then, owing to the improved methods developed by him that the Cæsarian section, at one time almost abandoned in despair, become again the legitimate operation for the majority of surgeons, superseding the Porro operation, which was reserved for certain cases only. His own results in this operation, as told me by himself, are as follows: He has done the operation up to date, in all, nine times, saving mother and child in every case except in one, in which the child was dead in utero three weeks before operation, owing to uterine contractions set up by the presence of a myoma in the pelvis. He is a frequent contributor to medical journals in almost every department of gynæcology, and, although still so young, is a Professor Extraordinary of Leipzig University, and has been made an honorary member of several European and American gynæcological and obstetrical societies.

Like most abdominal surgeons, he has his own private hospital, which can accommodate about thirty patients. The operating-

room is large, well lighted and well ventilated, and kept scrupulously clean. The operating table, devised by himself, is made of zinc, and has an arrangement for placing the patient in Trendelenburg's position when necessary. The tables for instruments, etc., consist of iron frames supporting glass shelves. Chloroform is the anæsthetic almost entirely used, but many of the minor operations on the cervix, as well as anterior colporrhaphy and curetting of the endometrium, are done without anæsthesia.

In the treatment of retroversions of the uterus in movable cases, after replacing the uterus a Hodge's pessary is introduced; if not satisfactory, a Thomas pessary is tried, keeping the patient, however, under observation for some time, as this form of pessary is apt to cause abrasions. In fixed cases, in which the uterus cannot be brought forward, owing to adhesions, an exact diagnosis must first be made under anæsthesia, avoiding cases complicated with pyosalpingitis, or in which there is elevation of temperature. Under anæsthesia, an attempt is made to break up adhesions and replace the uterus. If successful, the treatment is then continued by practising massage of the uterus at regular intervals, after the method introduced by Schultze. By this method I have seen cases completely cured of all their symptoms, and it is generally successful if the adhesions are of comparatively recent date. Should this method fail, the abdomen is then opened, the adhesions separated, and the uterus brought forward and kept in position by ventrofixation.

Sänger does not approve of the rapid forcible method of dilatation of the cervix, but still adheres to the old one by laminaria tents, and has no trouble with them when properly sterilized. In stenosis of the cervix, three tents are introduced in succession. The first is allowed to remain for twenty-four hours, morphia being given when necessary to relieve pain. Then it is removed and the uterine cavity irrigated by sublimate solution 1–1000, and a second introduced, and so on till the dilatation is completed. The gradual method of dilatation, by packing the cavity of the uterus with strips of iodoform gauze, first introduced by Prof. Vulliet of Geneva, has also given satisfactory results in Sänger's hands.

The after-treatment of his laparotomy cases varies somewhat from the rule I have seen followed. On the first day after operation, when vomiting occurs, the patient gets nothing, otherwise a teaspoonful of hot tea is given every quarter or half hour. On the second day the same, but in greater quantities. On the third day coffee, and from this on till the eighth day bouillon without solids. Castor oil is now given every third day, and the patient gets solid food regularly.

Sänger has no faith in Tait's theory in regard to the good effects of salines after abdominal sections, so none are given. Morphia is freely administered when necessary to relieve pain. The superficial sutures are removed at the first change of dressing on the 10th day, and the deep ones on the 14th. On the 18th day the patient is allowed to sit up in bed, on the 19th out of bed, and is, as a rule, discharged on the 21st.

As Sänger is one of the most conscientious aseptic surgeons I have yet seen, some of his methods of sterilization may, perhaps, prove interesting and profitable to those not familiar with some of the latest and best methods, and I will try to briefly state some of them.

Sterilization of patient for abdominal section.—Patient is given a bath twice by the nurse the day before operation. The parts are then shaved, and a towel saturated with sublimate solution kept over the abdomen over night. Immediately before operation the parts are again scrubbed with soap and hot water, then with ether, and finally with sublimate solution. Plain gauze, sterilized by steam for two hours, is then laid around the field of operation.

Suppurating and fetid cases are, as a rule, not admitted into the private klinik, especially cases of puerperal suppurative parametritis.

Sterility of hands.—First thoroughly scrubbed with hot water, common soda soap, and fine sand (mechanical disinfection) for about fifteen minutes, paying special attention to cleansing of the nails. They are then washed in strong solution of permanganate of potash till the skin is thoroughly stained, then in saturated solution of oxalic acid till decolourised. This method

was first worked out and put in practice by Professors Kelly and Welch of Johns Hopkins Hospital, and published by them in their joint works on "Sterilization of the Skin," although it had, before that time, been used in pathological laboratories. It has also been used here to sterilize the abdomen and genitals before operation.

Sterilization of instruments.—Are first boiled in Professor Bergamen's apparatus for five minutes in a 1 per cent. solution of carbonate of soda. After operation the instruments are washed in hot water and then allowed to stand for some time in a solution of carbonate of soda and soap. After that they are polished first with alcohol and powdered pumice-stone and finally with chamois skin and alcohol.

Sterilization of silk.—Is first boiled five to ten minutes (but not longer) in 1 per cent. carbonate of soda solution and then kept in Bergman's solution, which consists of alcohol 800, corrosive sublimate 10, and distilled water 200.

Sterilization of gauze.—Is exposed to steam for two hours in Thursfield's sterilizer, nnd then placed in sublimate sol. 1–1000. Before operation it is washed out in water sterilized by boiling. Sublimate solutions are made with filtered water. Plain sterilized gauze is used instead of sponges in plastic operations, irrigation being used only when the field is very bloody.

The flame of the spirit lamp is used to sterilize instruments that happen to fall during operation. It is also used to burn through the silk ligatures instead of cutting them. In this way the ends of the silk ligatures become dried and stiffened, and the needles threaded with much greater speed.

Sterilization of laminaria tents.—First thread with sterilized silk, then boil one minute in 5 per cent. carbolic solution; then give the proper curve, and keep in glass-stoppered jars in solution of iodoform and ether.

As a plastic surgeon Sänger specially excels, and many of the newer gynæcological operations done by him are either original or modifications of his own of operations originally devised by others. As regards himself personally, I am convinced that no one intimately acquainted with him can help admiring the great

and many gifts of mind and heart which he possesses. Those qualities which, perhaps, impress us most in him are his courtesy, his modesty, his enthusiasm in his profession, and his absolute truthfulness and honesty in regard to his statistics. Although lacking that stimulus to hard work which teachers find in their pupils (for let it be remembered that his position in the university is purely an honorary one), he has already won an honourable name in his profession, and, we have every reason to hope, will, in the future, continue to be an active and original worker in the field of medical science.

After spending three months in Sänger's klinik I came on to Berlin, and have been taking Martin's course. It includes a course in gynæcological diagnosis, an operative course on the cadaver, and the privilege of being present at his abdominal sections and most of the minor operations. Martin is the most wonderful operator as regards speed I have yet seen, and his results seem to be all one could reasonably wish for. About two weeks ago I saw him do no less than nine abdominal sections, beginning at 10.45 A.M. and ending before 3 P.M., and this including time for lunch. The actual aggregate time during operation on these nine cases (by which I mean the time occupied from the first incision till the dressing of the abdominal wound) I reckoned by the watch to be exactly two hours and ten minutes. Moreover, most of these cases were trying and difficult ones—*e.g.*, the exfoliation of a renal cyst as large as a pregnant uterus at full term, complicated by extensive adhesions to most of the abdominal organs, this occupying but 32 minutes; two cases of enucleative myomotomy, one occupying but 15 and the other 18 minutes; three of them were cases of pyosalpinx with ovaries and tubes almost buried in adhesions. We had an opportunity of seeing all these nine cases on the third day after operation, again on the sixth day, and finally on the tenth day, and all were apparently doing well, judging by the temperature charts and the comfortable expression of their countenances. In the third of these cases the diagnosis was not definitely made before operation. On opening the abdomen the peritoneal cavity was found to be filled with dark fluid blood, the source of which

was soon discovered to be a ruptured tubal pregnancy. The tube was at once tied off, the blood with numerous small clots mopped out with sponges, and the abdomen closed without irrigation or drainage. The speed with which a surgeon does an operation is said to be largely a matter of temperament, but in Martin's case there are several reasons to account for it. With his exceptionally large experience in this kind of surgery, he knows at once the quickest and best methods of dealing with difficult cases, and his assistants, trained as they are for years in his own methods, are able on that account to render him much valuable assistance and save much time to the operator. Then, again, any trifling bleeding in the abdominal wound or peritoneum he regards as harmless and wastes no time over it, provided asepsis is rigidly carried out. Further, he never seems to think it necessary or advisable to irrigate the peritoneal cavity, and except, perhaps, in cases of abscess cavities, he has entirely given up drainage. In one of the cases of pyosalpinx referred to above, the tube was ruptured in attempting to separate it from its adhesions to the back of the uterus, and pus escaped into the peritoneal cavity, yet no irrigation was considered necessary. In the removal of diseased appendages, he is as conservative as possible, never removing them completely unless hopelessly diseased. Any sound portion of the ovary, which may appear still capable of performing its physiological function, he leaves behind, tapping innocent-looking small ovarian cysts or cases of hydrosalpinx, after the method practised by some American gynæcologists. His method of abdominal enucleation of the two moderately large submucous uterine fibroids mentioned above was as follows: Abdominal incision extending from symphysis pubis to beyond umbilicus, the uterus with its tumour was then grasped and partly pulled out through the abdominal wall; after two or three sweeping incisions into the uterus the tumour was reached, and in a few seconds shelled out of its cavity. After curetting the endometrium from above, the uterine cavity was closed off from that left by the tumour by buried continuous catgut sutures extending to, but not including, the mucous membrane. The tumour cavity was then closed from below upwards

by a series of continued and buried catgut sutures, tier upon tier until the surface was reached. The edges of the wound were then accurately brought together, and finally a series of deep silk reinforcement sutures were passed wide from the margin. The uterus was then dropped into the peritoneal cavity and the abdomen closed.

His method of total extirpation of the uterus seems simple, and involves extremely little loss of blood. When cancer of the cervix is also present, the diseased portion is as much as possible removed and the cervix closed by sutures before proceeding to extirpation. After thorough disinfection of the vagina and cleansing of the rectum the vaginal vault is exposed by means of perineal and lateral retractors. The cervix is then grasped in its posterior surface by tenaculum forceps and drawn as far as possible forwards toward the symphysis. By this means the posterior vaginal vault is put on the stretch, and the vaginal insertion to the neck of the uterus can, as a rule, be clearly made out. Then an incision is made in the whole breadth of this insertion, in its greatest possible extent, in order to reach as soon as possible the Douglas' pouch. When the connection between the cervix and vagina is but slightly developed, the opening into Douglas' pouch quite frequently follows with the first incision. Should this attachment be broad, then the opening into Douglas' pouch may be difficult and troublesome, and so much the more so the further one must go in order to reach the limit of attachment. As soon as the peritoneum is opened the incision is enlarged, so that the left index finger can be introduced to act as a guide to the passing of sutures and the line of incision. Then with a short, strong, curved needle, armed with stout thread, the vaginal edge of the cut surface is united in its whole extent to the peritoneal edge. All bleeding in this way must be arrested before proceeding further. The needle is passed from the vagina through the peritoneum, and then, again, from the peritoneum through the vaginal mucous membrane, and the ligature tied always on the vaginal side. As a rule, five of such sutures are required. When the opening into the peritoneum is difficult, and important bleeding takes place, the

broad wound surface may be sewed in the same way to the vagina until the deeper tissue is pulled down by tissue forceps, and the peritoneum opened and its edge united as before to the vagina. Any important bleeding from the uterus may be easily arrested by passing ligatures through its cut surface. The base of the broad ligament on each side is then tied off and divided in the same way, using, however, a stouter needle and armed with double thread. As a rule, three of such sutures are required. The separation of the bladder from the uterus is begun by cutting with the knife in its whole breadth directly towards the cervix and continuing the separation with the finger-nail. By passing a large silver catheter into the urethra and turning the concave side forward the line of separation may be more easily made out and all danger of wounding the bladder avoided. With small, fine sutures the peritoneum in front is united to the vagina as before. The fundus of the uterus can now, usually without much trouble, be brought down from behind, provided the cervix is drawn well forward behind the symphysis. The rest of the broad ligament on each side is now transfixed with the needle armed with double thread, the threads interlocked and tied on each side, and the uterus completely separated. The stumps of the broad ligaments are turned into the vagina, and the opening closed by uniting the peritoneum of the bladder with that of the rectum.

In his operations, Martin almost entirely uses catgut, and in the form of the continuous suture. It is prepared according to Bergmann's method as follows:

1. Sterilization of glass holders by exposing to action of steam for three-quarters of an hour.

2. Winding of catgut thread on glass spools.

3. Removal of fat from raw catgut by soaking in ether for twenty-four hours.

4. After pouring off ether, the catgut is immersed in Bergmann's solution, the formula of which has already been given.

5. Renewal of sublimate alcohol every twenty-four hours. At the earliest, after twice renewal of sublimate alcohol is the disinfection process completed.

6. Sublimate alcohol is now poured off and plain alcohol added. According as somewhat stiff or very soft catgut is required, the alcohol used is absolute and pure or 20 per cent. glycerine is added.

A. W. G.

OUR LONDON LETTER.

LONDON, Aug 10, 1892.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

DEAR SIRS,—I have thought that the following notes on the modern methods of treating *Tineæ Tonsurans* might possibly be of interest to some of your readers:

As is well known, few parasitic affections are more obstinate and intractable than the common ringworm of the scalp. The reason for this is no doubt the difficulty experienced in getting at the very troublesome little trichophyton fungus, on account of the depth to which it makes its way into the tissues, especially in the hair follicles themselves. That the fungus is readily destroyed by many of the parasiticides commonly employed for the purpose is proved by the comparative facility with which the disease is cured, when it affects the skin only. Even the more severe eczema marginatum or "dobé's itch" of tropical climates (so common amongst the natives of India) is readily controlled by the application of Goa powder, or of its active principle, chrysarobin.

The chief difficulty, then, with which we have to contend in treating the corresponding affection of the hairy scalp is that of bringing the parasiticide employed into effective contact with the fungus. A short account of the methods now in use, for the attainment of this end, in the hospitals of London may prove of interest to your readers.

First as regards the removal of the hair. In some cases, cutting it short in the vicinity of patches of ringworm, where these are not very numerous, is deemed sufficient. In many skin hospitals, however, shaving of the scalp is always insisted on. Both these methods fail in one particular, since obviously they leave the affected roots of the hairs safely imbedded in their

follicles, and to this extent interfere with the entrance of the application which it is intended to use. Epilation is undoubtedly a more effective method, especially where the disease is of limited area. If the child is not too young, and the disease not too diffuse, this should be the first step in the treatment. The affected hairs are, as a rule, already loosened, and, with patience, can be successfully removed with epilation forceps, a cocaine ointment (10 per cent. in lanolin) being first applied if the patient is young and nervous.

For direct application, ointments are at once the most convenient, and in some ways the safest applications. Lotions made with spirit, æther and chloroform are more apt to irritate the scalp, especially in the case of young children.

A recent and important improvement in the treatment of this disease is the use of *lanolin*, instead of vaseline or the animal fats, as the basis of the ointment employed, since it is undoubtedly more penetrating than these latter. Lanolin is, however, too sticky to use alone, and must be mixed with a fourth part of olive or almond oil. It is a good plan, too, to apply the ointment with a stiff brush, rubbing it in twice a day or oftener, instead of merely smearing it on the surface.

At the Blackfriar's Skin Hospital a favourite application is:

Acid salicyl., acid carbol., āā ℥ss.
Lanolin, vaseline, āā ℥ss.

In older patients or obstinate cases the carbolic and salicylic acids may be increased to ℥i of each to ℥i.

At the University College Hospitol, oleate of copper, ℥i to ℥iii to ℥i, and oleate of mercury 5 to 20 per cent., are common applications. These penetrate well. Their strength, however, requires to be carefully regulated. Dr. Crocker also recommends hydr. perchlor. gr. iii dissolved in ℥i of spirits of wine and turpentine ℥i.

At the Middlesex and London Hospitals, carbolic and salicylic acids, sulphur and chrysarobin ointments are in use. The last mentioned, whilst effectual in some cases, has the disadvantage of staining everything it comes in contact with, even the hair itself being discoloured.

These are, of course, but a few of many different applications favoured by dermatologists. Unfortunately, it remains true that time and unlimed patience are as necessary as ever they have been to a successful cure of this very troublesome affection.

RANKINE DAWSON, M.A., M.D., &c.

Reviews and Notices of Books.

A New Pronouncing Dictionary of Medicine. By JOHN M. KEATING, M.D., Fellow College of Physicians of Philadelphia: Visiting Obstetrician to the Philadelphia Hospital and Lecturer on Diseases of Women and Children; Gynæcologist to St. Joseph's Hospital; Surgeon to the Maternity Hospital, etc.; Editor "Cyclopædia of Diseases of Children." And HENRY HAMILTON, Author of "A New Translation of Virgil's Æneid into English Rhyme"; Co-author of "Saunders' Medical Lexicon," etc. Price, cloth, $5.00; sheep, $6.00 net. Philadelphia: W. B. Saunders.

This is a voluminous and exhaustive handbook of medical, surgical, and scientific terminology, containing concise explanations of the various terms used in medicine and the allied sciences, with phonetic pronunciation, accentuation, etymology, etc. An appendix is added containing tables of micro-organisms, lists of drugs, poisons, doses, and many other important facts. The principal nerve plexuses are shown in diagrams so that the distribution can be seen at a glance. The various weights and measures are tabulated and compared. In effect, the amount of information given in the few pages of the appendix is wonderful.

The form of pronunciation adopted is that used by the majority of English-speaking physicians, although the Latin form is sanctioned. The rules of accentuation laid down in Worcester (unabridged) as governing the English language have been closely adhered to Hundreds of new words are added, while obsolete terms are dropped to keep the volume of such a size as to be convenient for ready reference.

Essentials of Diagnosis. Arranged in the form of Questions and Answers prepared especially for Students of Medicine. By SOLOMON SOLIS-COHEN, M.D., Professor of Clinical Medicine and Applied Therapeutics in the Philadelphia Polyclinic, Physician to the Philadelphia Hospital, etc.; and AUGUSTUS A. ESHNER, M.D., Instructor in Clinical Medicine in Jefferson Medical College and in the Philadelphia Polyclinic, Registrar in the Neurological Department of the Philadelphia Hospital, etc. Price $1.50. Philadelphia: W. B. Saunders.

This book is number seventeen of Saunders' Question Compends, and is prepared to meet a popular demand. It is written especially for students, and is in the form of question and answer, everything being sacrificed for accuracy and brevity. This form certainly presents some advantages, because when a question is asked, the student, by the power of association of ideas, gives the main facts, and if he is careful to digest as well as memorise them, it helps him to diagnose obscure ailments in a logical and scientific manner. Of course there is danger of the student relying too much upon these compends as an easy way of getting up his work, and to guard against this the authors advise the student not to rely upon it to the exclusion of standard and more elaborate works, as it is elementary in character, devoid of detail, and represents but an outline of the subject with which it has to deal.

A Practical Treatise on the Diseases of Women. By T. GAILLARD THOMAS, M.D., LL.D., Emeritus Professor of Diseases of Women in the College of Physicians and Surgeons, New York; and PAUL F. MUNDE, M.D., Professor of Gynæcology in the New York Polyclinic. Sixth edition, revised and rewritten by Dr. Mundé. In one large octavo volume of 824 pages, with 347 illustrations, of which 201 are new. Price, cloth, $5.00; leather, $6.00. Philadelphia; Lea Brothers & Co.

That the fifth edition of Thomas' well-known work on Diseases of Women should have been reviewed and supplemented by

Paul F, Mundé is alone sufficient to increase the already well-established confidence of the profession. The bracketed difference of opinion must be, at times, a source of difficulty, though, as a rule, the better of two good ideas may be readily chosen. It is needless to dwell on the classification. It is beyond all question excellent. The chapter on pessaries is particularly acceptable, clearly demonstrating that their intelligent application is necessary to the successful treatment of the dislocated uterus. The authors claim it to be as difficult to treat displacements of the uterus without pessaries at ague without quinine. In ovariotomy, their after-treatment has the merit of novelty and practicability. The bowels are kept patent from the beginning by the daily use of a saline, sulphate of soda, and the patient is moved occasionally on one or other side within six hours after the operation. The reviewer recently operated on these lines and with the most gratifying results. To say nothing of the greater claim to uninterrupted recovery, the ease and comfort to the patient can be readily understood.

Though these two chapters are specially alluded to, all are alike meritorious, and will well repay careful perusal and study.

Anæsthetics, their Use and Administration. By D. Wilmot Buxton, M.D., B.S., &c., Administrator of Anæsthetics and Lecturer in University College Hospital, the National Hospital for Paralysis and Epilepsy, and the Dental Hospital of London. Second edition, revised and enlarged. London: H. K. Lewis. 1892.

This is evidently written by one who has practical experience of his subject, and on that account it is more valuable than if it was simply a theoretical treatise on this important but neglected subject. The various forms of apparatus used in the administration of anæsthetics are clearly described and also illustrated by cuts. The chapter on the "preparation of a patient and choice of an anæsthetic" is particularly good, the various conditions influencing a choice being distinctly, yet briefly, stated. More space should be given to the accidents of anæsthetics, and more stress laid upon inversion of the patient in syncope. No

mention is made of hot water as an application to the præcordium in heart failure, and of ice water forcibly thrown against the epigastrium in respiratory failure. The work is well worth reading, and will repay the time so spent.

The Physician Himself and Things that Concern his Reputation and Success. By D. W. CATHELL, M.D. Tenth edition; thoroughly revised, enlarged, and rewritten; 348 pages. Philadelphia: The F. A. Davis Company, 1231 Filbert street. 1892.

We welcome the new edition of this book, which is now so well known that it requires little comment. It is brought well up to date, and should be in the library of every member of our profession. The author has succeeded in carrying out the ideal with which he started, to harmonize his teachings with the advice given by the Bishop of Lonsdale to those who came to him inquiring the way to heaven—"Turn to the right, then go straight forward."

Braithwaite's Retrospect. Vol. CV. January to June, 1892. Uniform American edition. New York: G. P. Putnam's Sons.

This volume contains the cream of English medical literature for the first six months of the present year. It is well indexed and forms a most useful book for reference. It is up to its usual standard, more than which it is not necessary to say.

BIBLIOGRAPHY.

An Epitomised Review of the Principles and Practice of Maritime Sanitation, by Joseph Holt, M.D., former President of the Louisiana State Board of Health, 1884-1888. L. Graham & Son, New Orleans.

Report on Crops and Live Stock in Manitoba. Winnipeg, August 1, 1892. Bulletin 36. Issued by the Department of Agriculture and Immigration.

Proceedings of the Society for the Study of Inebriety. No. 33, Aug. 10, 1892, containing "The Treatment of the Morphine Disease," by J. B. Mattison, M.D. H. K. Lewis, London.

A Valuable Experiment bearing upon Sympathetic Ophthalmia, with a critical review of the subject by Robert L. Randolph, M.D., Assistant Ophthalmic and Aural Surgeon to the Johns Hopkins Hospital and to the Presbyterian Eye and Ear Hospital, Baltimore; Ophthalmologist to the Baltimore and Ohio Railroad. (Reprint from the Archives of Ophthalmology, Vol. xxi, No. 3, 1892.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 24th, 1892.

F. BULLER, M.D., PRESIDENT, IN THE CHAIR.

Interscapular Thoracic Amputation for Enchondroma.—DR FINLEY exhibited this specimen for Dr. Shepherd. The growth was a large globular tumour, about five inches in diameter, and was attached to the inner side of the surgical neck of the humerus, lying beneath the muscles passing from the scapula to the humerus. For the most part it was of cartilaginous consistence, but to the inner side there were a few cysts containing a colloid material. The tumour had encroached slightly on the scapula, causing some thickening of the dorsal axillary border of that bone. Microscopically, the greater part of the tumour was made up of cartilage, many of the cells being small and irregular, others large with two nuclei, and a few showing two or three cells in each capsule. The cystic portion of the growth showed a portion to be made up of structureless material, with here and there infiltration of small round cells.

DR. SHEPHERD said the patient was a woman, aged about 32, who said she had first noticed the growth four years before. It gradually increased in size, and for the last year the arm had been very painful and was so fixed that it was useless. Dr. Shepherd at first thought the disease originated in the scapula, and that the affection in the humerus was secondary, but on examination after removal it was found that the disease was primary in the head of the humerus, and that the scapula was only slightly involved, the chief disease being in the muscles. The growth in the axilla pushed out the scapula, giving it the appearance of being extremely diseased. The arm and scapula were removed at one operation. The clavicle being free from disease, was not removed, and this gave the shoulder a much better appearance in consequence. Dr. Shepherd remarked that the operation, which is more formidable than dangerous, is usually performed in two stages—first amputation at the shoulder joint, then excision of the scapula. The mortality is 20 to 30 per cent. The

operation was first performed in 1838 by McClellan of Philadelphia, and afterwards by Syme and Ferguson. The patient whose history has just been narrated recovered rapidly, and was going about on the fourth day after operation.

Nephrectomy.—DR. SHEPHERD exhibited a kidney which he had removed on May 26th. The patient, who had been under the care of Dr. Fenwick, had suffered from symptoms of renal calculus for about twenty years. Last August Dr. Fenwick removed a large branched calculus from the kidney; the wound healed up well and the patient went about all winter. After a time, however, pus began to appear in the urine, and within a few weeks a tumour developed over the region of the kidney, the patient suffered great pain and began to fail in health. Dr. Shepherd, at Dr. Fenwick's request, took charge of the case, and decided to operate after much hesitation, on account of the amount of cicatricial tissue that would be present. The kidney could only be removed in pieces, the central portion with the vessels being imbedded in a large mass of cicatricial tissue. Whilst looking for the vessels and dissecting out the hilus a free hemorrhage occurred, which could not be easily arrested, the tissue allowing of no ligature; so a forceps was left on and the wound packed with iodoform gauze. The forceps were removed at the end of forty-eight hours. She suffered much from shock after the operation, but recovered fairly well. After a week's time there was a sudden severe hemorrhage. Dr. Bell happened to be present and packed the wound. On the following day a second hemorrhage occurred. A consultation was held and the packing carefully removed; at the bottom of the wound was seen the vena cava and some sloughy tissue, which, when pulled away, caused severe hemorrhage. On placing the finger in the wound to stop the bleeding it was found that there was a large opening in the vena cava; plugging was of no avail, and the patient, who was already reduced by frequent losses of blood, died in a few minutes. The fatal result occurred just eleven days after the operation, and Dr. Shepherd did not think that anything further could have been done. The other kidney was probably also affected, as pus remained in the urine after the operation.

Wound of the Femoral Vein in Hunter's Canal.—DR. SHEPHERD exhibited a portion of the femoral vein in which was imbedded a piece of metal. The patient had been wounded by a piece of a metal fog signal, which struck him in the thigh; the hemorrhage from the wound was very profuse, but was stopped by pressure and linen packing. He had been taken to the General Hospital, where the house surgeon had stuffed the wound with iodoform gauze. When Dr. Shepherd saw the man oozing was still going on, so he decided that it was a case for immediate investigation. He quickly cut down, found the sartorius muscle cut across and blood coming from Hunter's canal, and on examining further, a large wound was seen in the femoral vein. He tied the vein and removed a portion of it, which was found to contain the piece of the metal from the fog signal. The man made a complete recovery, and has had no œdema of the leg.

Intestinal Obstruction due to a Large Gall-stone.—DR. JOHNSTON gave notes of the autopsy on a case under the care of Dr. Armstrong. The patient had a large hernia in the abdominal wall, on the right side of the umbilicus, and in which a large portion of bowel was present. A fæcal fistula had existed at one time in the region of the hernia, but was healed at the time of the autopsy. There was no peritonitis, no strangulation of the bowel. The upper part of the small intestines was distended with fluid fæces, while the lower part was collapsed; just where the ileum passed into the hernial sac a large mass could be felt, which proved to be a gall-stone about the size of a walnut, and fascetted. On examining the intestines, a fistulous opening between the head of the gall-bladder and the second portion of the duodenum could be seen; the gall duct was somewhat dilated and contained some small stones, but there was no obstruction in the common duct. The patient had been subject to attacks of colic, and became quite yellow. Four days before death she was seized with vomiting, pain, and enlargement of the hernia; her condition appeared to improve, but she died suddenly.

New Invention.—DR. JOHNSTON exhibited a centrifugal machine for the very rapid separation of sediments in various

fluids. It is of great assistance in examining urine, as the sediment can be obtained within a minute; it also may be used in examination of the blood.

A Case of Zoster-Ophthalmicus.—DR. BULLER read the history of this case, which appeared in the August number of this JOURNAL.

Discussion.—DR. PROUDFOOT had under his care a girl who had herpes on both wrists and a small spot on the cornea. He asked Dr. Buller what his experience was of the use of eserine and pilocarpine, as his own had not been favourable, and he was inclined to the older use of atropine and hot fomentations.

DR. MCCONNELL asked what would be the result to the cornea if the disease was left alone; would it tend to get well without treatment?

DR. SHEPHERD said that he had never seen a case of bilateral herpes. It is a self limited disease, and would get well of itself.

DR. BULLER, in reply, said that as atropine has anodyne properties, he usually treats such cases with it; but here he had used it so long he thought a change would be beneficial. He would never use eserine while he had pilocarpine. It is quite possible if the disease was left alone it would recover in time, and as it is only superficial, would result in a perfect cure. It is one of the most obstinate forms of inflammation of the eye.

An extraordinary meeting of the Society was held on Wednesday, September 7th, Dr. Buller, the President, being in the chair. The meeting had been called on receipt of the following letter:—

HEALTH DEPARTMENT,
CITY HALL, MONTREAL, Aug. 30th, 1892.

To F. BULLER, ESQ., M.D.,
President Medico-Chirurgical Society.

SIR,—I am instructed to inform you that, in view of the danger that Asiatic cholera may reach our shores, the Board of Health are endeavouring to put in operation every possible measure for the protection of the city; and that they would therefore be happy to receive any suggestion your Society may be pleased to offer respecting the prevention of cholera.

I have the honour to be,
Your obedient servant,
J. IGNATIUS FLYNN, SECRETARY.

After considerable discussion, it was moved by Dr. Jas. Bell, seconded by Dr. Shepherd, and unanimously adopted, that the above letter be replied to by the following resolution:

"That this Society, recognizing the great danger to the lives of the citizens as well as to the commerce of the country from the introduction of Asiatic cholera which is now threatened, deplores the fact that the city of Montreal, with its adjoining suburbs, is at present wholly unprepared to cope with cholera or other epidemic disease. This Society regrets that an important recommendation which it made to the City Council through a deputation of its members some months ago—viz., that a competent sanitary engineer be appointed—has, up to the present time, not led to any satisfactory results. Further, that this Society is of the unanimous opinion that steps should be immediately taken to put the city in a condition of cleanliness; to provide suitable disinfecting apparatus for the clothing and effects of suspected immigrants, and baths for such suspects themselves; that the Civic Infectious Hospital should be fully equipped and made available for the reception of cholera suspects at a moment's notice.

"That this Society is further of the unanimous opinion that the Health Department of this city should be capable of preventing the spread of cholera from such cases as may be imported into it, and that to this end no expense should be spared to secure a sufficient number of competent officers and all necessary appliances."

The President then appointed the following members of the Society as a deputation to wait upon the Board of Health and lay this resolution before them: The President, Dr. Jas. Bell, Dr. Perrigo, Dr. Guerin, and the Secretary.

It was thought well for the Society to take a step further and lay before the Federal Government their opinions on the question of Immigration and Quarantine. These views were embodied in the following resolution moved by Dr. Bell, seconded by Dr. Shepherd, and carried unanimously:—

"Whereas, in the opinion of this Society, nothing but the most watchful care on the part of the Federal and Provincial authorities can prevent the introduction of Asiatic cholera in this country, and

"Whereas it has been abundantly proved that the quarantine arrangements at Grosse Isle, and presumably at the other Canadian seaports, are absolutely inefficient,

"Be it therefore resolved that the Federal Government be urged—(*a*) To issue such instructions as shall prevent any further embarkation of emigrants for this country during the balance of the present season. (*b*) That as a large number of emigrants have already embarked for

Canadian ports, and who cannot be returned to the ports from which they have sailed, that all such emigrants be detained in quarantine, on their arrival, for a period of not less than twenty-one days. (c) That for present as well as for future safety such quarantine stations be, with the least possible delay, put into a condition of efficiency, in accordance with the most modern scientific principles."

The President appointed the following deputation to proceed to Ottawa and lay this resolution before the members of the Federal Government: The President, Dr. Craik, Dr. Lachapelle, Dr. Roddick, Dr. F. W. Campbell, and the Secretary.

The Society further fully endorsed and approved of the action of the Provincial Board of Health in prohibiting the landing of all immigrants after a certain date.

Selections.

Insanity and Criminal Responsibility.—The term "medical expert" as used in the criminal courts is one which frequently tends to make the profession the laughing-stock of the public at large, and it has become a by-word that such testimony is a reproach rather than a credit to the profession. A noted lawyer, upon being asked what in his consideration was the best life preserver, answered promptly, insanity. This is true enough, thanks to the medical expert. It must, indeed, be anything but comforting to those members of the profession who keenly feel its responsibilities to the public that so large a number of murderers and other criminals are not only saved from a just punishment through the endeavours of these experts, but again thrust upon the public to be a constant menace to society. This important subject may be viewed from two points,—first, the validity of the so-called expert testimony; second, the value of insanity or mental peculiarities or weaknesses as an excuse for crime. The first point is one that can only be briefly touched upon in this article. The term "medical expert" is one that has absolutely no value and frequently no meaning. Anyone having the title Doctor of Medicine can claim to be a medical expert. In America the student who attains his degree with little or no preliminary education and after a few months'

study, and the student who has passed brilliant preliminary examinations and obtained his degree after a four or five years' course in our great medical schools, both arrive at the same end as far as the public are concerned—they are "doctors," and here the matter ends. The title of "medical expert" may be claimed by one as well as the other—and more likely by the former than the latter. That criminal lawyers make active use of this vast unevenness is only too patent, and the mass of absurdly contradictory and untruthful evidence frequently elucidated when such expertism is called into requisition redounds to the great discredit of our honourable profession, and renders the value of evidence from reliable sources almost as questionable as that obtained from unworthy witnesses. Naturally there are unprincipled men in the medical profession, as in every walk of life, but a vast amount of the worthless evidence given in court by medical experts is the result of the deliberate suppression of the truth or of absolute ignorance. To be an expert on insanity means a life-long experience with such cases, and only those who have made nervous and mental diseases a specialty should be permitted to give evidence as experts.

But to turn to the other point at issue—Is insanity or mental peculiarity and weakness a valid excuse for crime? The Latin poet has justly said that *ira furor brevis est*, and criminal lawyers making use of the theory are content to prove that their clients were insane only at the moment of the commission of the crime, and therefore irresponsible. A glance at the results of coroner's inquests in the case of suicide reveals the great predominence of the verdict, "*felo de se* while labouring under temporary insanity." Indeed, some authorities go so far as to say that no one in the possession of their mental faculties would voluntarily take their own lives. Would not a similar contention be applicable in case of murder and other revolting crimes? Again, in cases where the criminal is evidently of a very low mental calibre, in whom bestiality and brutality are inherent traits, is it justice to credit him with the same amount of moral responsibility as an educated or sane man?

All this is theorizing; but theorizing that is made active use

of in our criminal courts, and theorizing which, to the disgrace of the so-called medical expert, turns out yearly from behind the bars a large number of dangerous criminals. In the enforcement of the extreme penalties of the law, two points are held in view —first, the example to others; second, the public welfare. In what manner the public welfare is to be conserved by the acquittal of the criminal insane or criminally irresponsible is not apparent. If such an acquittal meant a confinement for life or until the individual's mental condition had become such that he was no longer a menace to society, it would be another thing. It is only too common that when such criminals are subjected to confinement it is but a short time before they are liberated, but their mental condition is unimproved. The case of Deeming, which recently engaged the attention of the civilized world, is that of a man who has made murder a pastime—murder in its most brutal and barbarous form. Not only murder, but theft, forgery and a whole list of other crimes. A man in middle life, and until his arrest able to earn for himself a good livelihood; successfully act a series of different parts; travel extensively; court, marry, and become a father. For years he succeeded in adroitly covering up his atrocious deeds. He was finally brought to justice, his lawyer spoke of him as "the abnormal offspring of a mother's womb," medical experts came to his rescue and endeavoured to prove by various facts that he was morally irresponsible for the crimes he committed. The question is, should such a condition justify acquittal? In aiding the acquittal of such monsters our medical experts are confronted by a most grave responsibility, which we fear is in many cases unrecognized. To declare a man mentally deficient, morally debased, or intellectually wanting, and to prove that his mental organization is of low calibre, his moral instinct dulled through disease or inheritance, is well enough, but to assert the absence of moral responsibility and the justifiability of acquittal is a step too far. —*Medical and Surgical Reporter.*

Pain in the Sole of the Foot on Walking. (By J. J. Putnam, M.D.)—At a meeting of the Society

for Medical Observation on April 6, 1891 (*Boston Med. and Surg. Journal*, June 18, 1891), I mentioned a mode of treatment which I had found effectual in several cases of a painful affection of the sole of the foot. The communication was unpremeditated, and I had not posted myself particularly upon the literature of the subject, but I presumed that the affection was the same as that which has been admirably described by Dr. E. H. Bradford under the name of Morton's affection of the foot. I write now mainly to enclose a spontaneous tribute to the value of the treatment which I suggested. I may say that I do not claim any originality for the treatment, but that having been myself a sufferer for many years, and having therefore tried various modifications of the plan suggested, my experience may be worth recording. The affection as I have seen it consists in a tenderness of the sole, usually most marked opposite the space between the distal ends of the third and fourth metacarpal bones. In walking there are often referred sensations along the corresponding toes. If walking is persisted in, soreness often ensues, which finally may give rise to dull pain throughout the whole leg. It is worse in wet and cold weather.

The treatment consists in protecting the tender point, either by putting a thin but stiff leather inside-sole into a broad shoe, with a hole cut of appropriate size and shape, or else by making a depression at this point in the sole of the shoe. This can be done by having the last made with a projection on it at the proper place. I have found it very important to make the hole in the inner sole of oblong shape, the long axis (which I think should be an inch or an inch and a half in length) running parallel with the metatarsal bone. In my own case the opening begins within about a quarter of an inch of the outer edge of the sole, and then slants forward and inward. The space between the heads of the third and fourth metacarpal bones lies opposite the opening. I find the proper place to make the opening by putting aniline ink over the tenderest spot on the sole of the foot, and then letting the patient put his naked foot into the shoe containing the inner-sole, which has been moistened with water so as to absorb the stain. Of course there is some smearing, but

the most anterior point is obtained in this way. After a time the leather of the boot-sole is pressed up into the hole in the inner sole, and then it may be necessary to renew the boot or shave off the elevation. In my own case, I have had my boots made for many years on a last which has a prominence on the sole corresponding to the hole in the inner-sole which I had formerly worn. Except when wearing a shoe made on this last, I can rarely walk a mile without great discomfort; and it must be admitted that in wet weather, which invariably makes the trouble worse, walking is still painful. The letter to which I referred is as follows, from Dr. Frank Holyoke, of Holyoke, Mass.:

"In the *Boston Medical and Surgical Journal* of June 18, 1891, page 607, I was delighted to find your reference to 'cases of pain (on walking) in the sole of the foot, radiating out to certain toes,' for I was at the time much embarrassed in my attempt to relieve the above complaint in two ladies, both of whom had been sufferers for many years; one having had two joints of the fourth toe amputated by some physician who thought in so doing to afford relief. Since the operation (one year ago), however, she has suffered even more. I had your treatment carried out immediately in both cases. The shoes fit nicely about the ankle and instep, but are broad enough for all five toes to lie flat, without lateral pressure. They afforded no relief until the oval was cut out of the inner sole, following your directions. No. 1 put on her shoes ten days ago. On the fourth day, being so pleased with the instantaneous relief, she walked up Mount Tom and back, a distance of five miles, and says, 'I did not know that I had any feet. I felt as though I had wings.' Hers are buttoned shoes. No. 2 (the one where the toe was so stupidly amputated) had a pair of shoes made to order which lace down to the toes, by which means she can regulate the pressure. She has worn them for six days now, and reports equally satisfactory relief. From your few lines I have made enough to keep me in shoes for a year, and I wish to extend to you my most hearty thanks! If you care for a sober report on these two cases, I would be happy to send it."—*Boston Medical and Surgical Journal*, Sept. 1, 1892.

Abscess or Aneurism.—The diagnosis between an aneurism and a deep-seated abscess in the same region has always been a subject of great interest to the practical surgeon, and much as we may pride ourselves upon the modern advance of our art, yet cases still occur in which this old question arises again, or causes great differences of opinion. In the case I am about to relate, so nicely were the signs balanced for aneurism and a great abscess, one for abscess, or against aneurism, that more than one-half the staff of the hospital stood boldly for the diagnosis, which finally proved erroneous—by that of aneurism—for it was an abscess. In the case of a popliteal aneurism, an abscess may very closely simulate its signs, when the purulent collection is deep, bound down by the deep fascia; under these circumstances so much pressure may be made by the confined matter as to retard the circulation in the artery at least to some extent and thereby stimulate one of the most reliable signs of aneurism. For I take it that the most certain diagnostic signs of aneurism are, first, the effect produced on the circulation beyond the limits and the *distensible* pulsation of the tumour; while those of abscess, on the other hand, are (first) deep fluctuation, and (second) superficial œdema. In the extremities, either upper or lower, these will usually guide aright; but in the thorax and abdomen they no longer equally apply. The late Mr. Dease's case has a striking illustration. It was a case of ilio-femoral aneurism in which suppuration had taken place. On viewing the tumour Mr. Dease gave his opinion that it was an abscess, and although his colleagues held an opposite view, he plunged a bistoury into it; purulent matter flowed out, and Dease looked up with a triumphant expression, but in a moment this was followed by a fearful rush of arterial blood, which quickly terminated the patient's life. I will now relate the particulars of the case which has led me to make these remarks:

Richard Latimer, 18 years of age, a very hale young man, was admitted on January 19th, 1891, into the Adelaide Hospital, Dublin, under Dr. Beatty's care. Since the previous April—that is, eight months before his admission—the patient has been suffering from *pain* in the left side, extending down both arm

and leg of that side, but most severe in the side of his chest. This pain got worse when he lay down in bed; so much so that he used to arch his back forwards to obtain some relief. He noticed a swelling in the upper part of his left chest wall for the first time on Sunday, the 1st of December, 1890. He was going to bed when this swelling was noticed. Next morning he went to the neighbouring dispensary, when Dr. Falkner saw him, and gave him, he says, a plaster to put on the tumour. He was a printer by trade. He now abandoned his employment, that being ordered, and since has had much less pain. When questioned as to any injury having been inflicted on his chest, he remembered that in March, 1890, just a month before the pain began, a very heavy iron bar had fallen against the front of his chest. Dr. Falkner discovered pulsation in the tumour and advised him to go to the hospital. Upon examination, a pulsating tumour about the size of half an orange was found projecting from the chest wall, at the upper part of the cardiac region. The pulsation is systolic and the second sound is accentuated over the tumour, but except this there is no murmur. No râles are heard through the lungs, but there is very feeble breathing all through the left lung and over the posterior part of it. There is dullness on percussion. The side is not at all retracted. The pulse is the same on both sides, and seems of equal volume. The sphygmoscopic tracings of each had the same characters, there was a little marked dicrotic curve.

Feb. 15.—The tumour has greatly increased in size during the past month. Its measurements are now as follows: vertical, $4\frac{1}{4}$ inches; transverse, $3\frac{3}{4}$ inches. There is a *strong pulsation* over it, and to the fingers placed on either side of the tumour this pulsation has a very expansile or distensile feeling. The next important point regarding this tumour is that it is *very tender* to touch, the patient wincing or even crying out when it is pressed or handled, and further *fluctuation* can be distinctly felt in it. The left side of the chest continues dull on percussion, except just along the spine, where the note is clear; the chest expands very sluggishly on the left side; breath sounds under left clavicle are feeble and almost inaudible laterally and posteriorly; temperature normal.

Feb. 16.—A consultation was held and the diagnosis as between abscess and aneurism discussed. In favour of the latter, or aneurism, were: first, the strong pulsation; second, its distensile character; third, the clearness of the cardiac sounds; fourth, the accentuation of the second sound. For abscess were: first, the age and strumous appearance of the patient; second, the position of the tumour; third, the great tenderness; fourth, local œdema. In view of these signs, it was determined to puncture the tumour with a hypodermic needle and thus demonstrate its contents. This I accordingly did then and there, and slowly drew into the glass cylinder—PUS. At once a free opening was decided upon and the patient was carried down to the operation theatre, there placed fully under the influence of ether, and with the aid of my colleagues I proceeded to lay open this pulsating, purulent collection. Although I gave my advice strongly for this mode of treatment, yet I confess I never felt more nervous at any operation. Although no doubt could now be entertained that we had to do with an *abscess*, yet it looked so like an aneurism that I felt very queer, and when having made a free incision a dark-greenish matter came freely out, my assistant drew back, muttering "*larnociatea fetrise.*" But no, it was dark sanguine pus. I washed out the cavity very thoroughly with a boric acid solution and then introduced my forefinger to ascertain if possible the extent of the cavity. I found a cavity about the size of an orange, but with an opening at its left posterior side, which may have communicated either with the pericardium or left pleura. I made no further investigation on this point; but having washed the cavity again, I drew the edges of the sac up to the skin, and secured complete drainage by stitching the opening in the sac to the skin, at the lower end of the wound. It could not be drawn together by deep or superficial sutures.

He improved very markedly after the operation and gained in weight. His temperature varied very much, sometimes as high as 101°, more frequently normal. The wound continued to discharge a weak pus, but not in any great quantity. The left lung, which had been dull on percussion, became resonant, and respiratory murmur was again audible through it. He went

to the Convalescent Home when the summer came, and for a little time seemed to be gaining health. A cheesy, strumous discharge continued to come from the wound. Small strumous suppurations took place in several places, and the urine was found to be very albuminous. He died during the summer.

Mr. Going conducted the post-mortem examination and reports as follows: On laying open the chest the operation incision was found to lead to the cavity of the left pleura; there was no opening into the pericardium. The pleural cavity was almost obliterated by dense adhesions between the visceral and parietal layers. The sinus led into a space on the anterior surface of the left lung, surrounded on all sides by firm adhesions. This space contained a quantity of curdy, purulent matter. The back of the left lung was also bound down by adhesions, but they were comparatively easily broken down. Under the parietal pleura was found, here and there, masses about the size of a hazel-nut, each of a cheesy, strumous matter. Over the whole of the right lung and more especially in front were very distinct adhesions; so much so that the lung tissue had to be cut away to open the chest. On opening the pericardium a small quantity of serosanguineous fluid escaped; the pericardium was covered with a thick honeycomb-looking substance which formed a tough membrane lining to it. The heart, when its cavities were opened, was found free of any valvular disease; the muscular tissue seemed atrophied. Extensive amyloid degeneration was taking place in both kidneys, liver and spleen.

In order that the interesting lesson in diagnosis taught by this case may remain clearly in all our minds, I would conclude the record of the case by reminding my hearers that the true nature of the case appeared when full weight was given to the age, temperament and constitution of the patient. Looking at the young man and considering his constitutional tendency, it became evidently much more likely that he should suffer from abscess than from aneurism —*Mr. J. K. Barton in Annals of Surgery*, Aug., 1892.

How to Draw Microscopic Objects.—There has always been a certain amount of difficulty attending

the use of the camera lucida or Beale's neutral tint reflector for the above purpose. The twisting of the head into an uncomfortable position, the great fatigue to the eyes, and the by no means easy task of viewing both image and pencil at the same time, add to the troubles of making a faithful likeness of the object upon paper. To those especially who do not possess a camera lucida or a Beale's instrument, and to microscopists generally, I recommend the following arrangement of ordinary apparatus. The microscope body is placed in a horizontal position, and the mirror removed from its sub-stage attachment. The microscope slide having been placed on the stage, the illuminant (lamplight for choice) is "condensed" on the slide by means of a "bull's eye" in the same way as for photography. Care must be taken to "centre" the light. The mirror is then attached to the front of the eye-piece of the microscope by a piece of thin wood or a sprig, and has its surface at an angle of about 45° with the plane of the anterior lens of the eye-piece. The image is thus projected on to the paper beneath. No distortion will occur if the outer ring of light is perfectly circular. A dark cloth such as photographers use is thrown over the draughtman's head and also the body of the microscope, and all light excluded save that through the microscope lenses. Any section can thus be easily, rapidly, and comfortably drawn and accurate representations of objects magnified up to 500 or 600 diameters can be obtained. —*A. Hopewell Smith in Journal Br. Dental Association.*

—Hime (*Brit. Med. Jour.*, July 16, 1892) has succeeded in transforming smallpox into cowpox. He obtained from a patient suffering from smallpox a supply of lymph, with which he inoculated a calf about ten weeks old. An eruption was produced which had all the appearance of vaccinia, and the lymph from which produced typical vaccination in a doctor who submitted to the experiment, and also in calves which were vaccinated in the usual way. The apparently irreconcilable difference between the results obtained by the observer and those of the Lyons Commission lies in the fact that the calf was used by him instead of the cow.

Another Case of Syphilitic Reinfection.

In the *Gazeta Lekarska*, No. 24, 1892, p. 532, Dr. Romuald A. Gorski, of Lipovetz, narrates the following very interesting case. In 1880, the writer being a student of the Kïer University at the time, a pupil of the same school was admitted to Professor Mering's clinic on account of syphilitic roseola over the chest and abdomen, accompanied by enlargement of the cervical and inguinal glands. The patient stated that he had had coition with a prostitute six weeks previously, and that on the next day he had noticed an erosion on the foreskin, which had rapidly transformed into a hard ulcer. The latter had healed under iodoform, while about five weeks after the coition the rash had come out. The gentleman was treated with 18 inunctions of gray mercurial salve (two grammes at a sitting), and in four weeks was discharged apparently cured, the only traces left being slight induration on the prepuce, and some enlargement of the lymphatic glands. In the course of time even those remnants disappeared tracelessly. Eleven years later (in July, '91) —during which period he had remained perfectly well and sound without undergoing any treatment whatever—he sought Dr. Gorski's advice for several ulcers in the retro-glandular groove, which had developed in two days after a coition, and one of which proved to be nothing else than a characteristic hard chancre, the others being soft ones. About the fifth week (after the sexual intercourse) there supervened abundant syphilitic roseola over the chest, abdomen and forearms, angina, and universal enlargement of lymphatic glands. Under the influence of twenty mercurial frictions, in four weeks the manifestations subsided. Notwithstanding a consecutive use of iodide of potassium, a month later he returned with recidival roseola over the body. Protoiodide of mercury having been prescribed internally, the rash vanished in a fortnight. In a few months, however, it recurred, to disappear once more after another course of the pills. The author emphasises that 1) his case furnishes an additional fully reliable evidence in favour of the possibility of syphilitic reinfection, which possibility is still denied by many practitioners; and (2) that in his patient the second attack was

much more severe than the first. In other words, the patient's susceptibility towards the syphilitic virus was not in the least mitigated by his having once had syphilis. [As far as we are aware, this is the seventh instance of syphilitic reinfection published by Russian and Polish observers during the last four years. (*Cft. St. Louis Med. and Surg. Journal*, Dec. 1891, p. 367; and June 1892, p. 373.) A very curious case of the kind has been lately communicated by Dr. W. Milligan (*vide* the *Journal of Laryngology, Rhinology and Otology*, May 1892, p. 205), the first hard chancre being situated upon the patient's right forefinger and the second in the right nostril.—*Reporter.*]—*St. Louis Med. and Surg. Journal*, Aug. 1892.

Aneurism of the Descending Aorta Treated by Bacelli's Method.—Many methods have been proposed for the treatment of aneurisms of the aorta. We call to mind the galvano-puncture, which had the inconvenience of requiring several seances to produce coagulation. Injection of liquids for this purpose cannot be used on account of their danger. Moore proposed to introduce a fine steel wire, 50 to 100 metres long, by means of a trocar, bnt this method has been abandoned. Bacelli (of Rome) used a watch spring, which he introduced through the walls of the aneurism. This method has given a certain number of successful results, and, therefore, was made use of by Br. Bourget, of Lauranne, in a man suffering from aneurism of the descending aorta. On deep palpation between the spine of the scapula and the third dorsal vertebra a tumour could be felt the size of a pigeon's egg, strongly pulsating. The sphygmographic tracing taken over this tumour was identical with one taken over the aorta. Later, the tumour became more prominent and gave rise to such severe pain that the patient demanded some intervention for his relief. The operator chose a watch spring about 2 mm. broad and 37 cm. long, the spiral being 5 cm. in diameter. The inner end was sharpened so that the puncture could be made with it without using a trocar. The spring was plunged into boiling diluted hydrochloric acid to disinfect it and also to render the surface

rough so that the clot would be more easily formed about it. A small valvular opening was made in the skin over the upper part of the tumour, then an assistant held the spring unrolled while the sharpened end was thrust into the sac. This was accomplished without difficulty, the spring rolling up again and becoming enclosed in the aneurism. There was no rise of temperature nor any symptom referable to the operation. The tumour diminished in volume, all pains disappearing. One month after the operation an exploratory puncture was made at the upper part of the tumour and another at the lower, without obtaining any blood, the needle on being moved giving the impression of being in an elastic mass. The pulsations are much slighter, and during 3½ months the patient gained 6 lbs.—(*Revue de Therapeutique Medico-Chirurgicale*, July 1, 1892.)

On the Results of Treatment of Simple Fracture of the Shaft of the Femur.—A committee of the American Surgical Association, agreeable to a vote of that Association, have made a report on "What should be considered as a satisfactory result [other than perfect union] in the treatment of a simple fracture of the shaft of the femur?" (*Medical News*, Sept. 26, 1891, p. 345.) Thirty-four members of the Association replied to a circular that was addressed to them, and have come to the following conclusions;

A satisfactory result has been obtained in the treatment of fracture of the shaft of the femur when—(1) Firm bony union exists. (2) The long axis of the lower fragment is either directly continuous with that of the upper fragment or the axes are on nearly parallel lines, thus preventing angular deformity. (3) The anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position. (4) The length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs—namely, from one-eighth of an inch to one inch. (5) Lameness, if present, is not due to more than one inch of shortening. (6) The conditions attending the treatment prevent other results than those obtained.

Fracture of the Upper Third of the Femur, exclusive of the Neck.—In a paper of considerable interest, Oscar H. Allis (*Medical News*, Nov. 21, 1891) considers the above subject, and draws the following conclusions:—

After fracture of the shaft, the fragments are bound together by a hinge.

The hinge will be short if the vulnerating force was only sufficient to break the bone.

If the hinge is short, overlapping can only occur to a very limited degree. In all such cases the "shortening" will be due to angular displacement.

If the vulnerating force is greater than necessary to merely fracture the bone, the unexpended force will tear the hinge freely.

When the hinge is loose, overlapping, with or without angular deformity, is possible.

The shorter the hinge the greater will be the control of the upper fragment through the agency of the lower.

Traction on the lower fragment under all circumstances is incapable of restoring the long axis of the broken bone.

If the hinge is short, traction will draw down the upper fragment, but cannot efface the anterior angular tendency.

If the hinge is long, traction will exert but little influence upon the upper fragment.

Traction in the oblique direction has no advantage over horizontal extension.

The so-called "weakness" after fracture of the femur, is not due to deficient bone-repair.

"Weakness" is greatest when due to angular deformity with rotation of fragments.

Angular deformity, with rotation of fragments, compels both hip and knee to assume abnormal relations to the trunk.

Shortening, due to overlapping, without angular deformity or rotation of fragments, is no barrier to heavy, manual labour.

Treatment directed to the lower fragment is the probable agency in causing rotation in the lower fragment.

No surface treatment can insure a useful limb.

Osteotomy has corrected many a faulty union after months of waste time.

The conversion of a sealed (simple) fracture into an exposed (compound) one offers the only possible means for accurate diagnosis, and the only possible method of rational treatment.

Patients and surgeons who stop short of this procedure must compromise with best results.

—Hunt (*Brooklyn Med. Journal*, Aug. 1892) recommends bichromate of potash as an expectorant in catarrhal conditions of the mucous membrane of the respiratory tract. He recommends giving it in 1-20 gr. doses every fifteen or thirty minutes until the severe symptoms have passed off and then diminish in frequency to one hour intervals. It is taken and borne readily by the youngest infant, unless given within a few minutes of feeding with milk, with which it seems to be incompatible, so that when the administration of the medicine is at very short intervals, milk-feeding must be for the time suspended.

—Belfield (*Med. Record*, July 16, 1892) says that trichloride of iodine possesses great power in arresting the two bacterial processes met by the surgeon—tuberculosis and suppuration. It is a combination of iodine and chlorine ($I Cl_3$) made by passing chlorine gas over iodine. Any trace of animal matter decomposes it at once, therefore distilled water must be used in making up solutions. It is a stable compound, and the crystals and solutions may be kept for months. The author has been using the trichloride for six months, and gives a summary of the cases. He has employed it in the following forms: "For hypodermic use one-tenth to one-half per cent. solution in distilled water alone, or water four parts, glycerine one part. For instillation of deep urethra and irrigation of bladder, and for injection of serous cavities, the same solutions. For suppurating wounds, irrigation with one to five per cent. solution in water, either alone or with glycerine. For putrid surfaces (cancerous), venereal sores, etc., five to twenty per cent. solution in equal parts of water, glycerine and alcohol." Solutions stronger than five per cent. usually cause decided smarting in ordinary wounds, while the crystals are caustic to denuded surfaces. Sterilized gauze dipped in a solution of from one to ten per cent. retains the compound for an indefinite time. The disadvantages of this substance are its caustic preperties in strong solutions and its deleterious action on instruments and clothing. Iodine intoxication may possibly be produced, but the author has never seen it.

THE

Montreal Medical Journal.

VOL. XXI. SEPTEMBER, 1892. No. 3.

ASIATIC CHOLERA.

The present epidemic of cholera is considered to be particularly severe, resembling in this and other respects the epidemic of 1832, which proved very fatal in Quebec, Montreal, and other Canadian cities and towns. The great development of preventive medicine during the past two or three decades has done much to lessen the mortality of cholera as well as other infectious diseases. Great credit is due to the profession in England for the advanced stand of sanitation in that country. In no other country have they been able so thoroughly to prevent the spread of this disease. During the past ten years, while cholera has claimed thousands of victims in Russia, Germany, Italy, Spain and France, our mother country has remained free, although time and again the disease has been imported from infected districts in the continent. This great success was obtained without any of that vexatious interference with the commerce of the country which has characterized the actions of health boards on this side of the Atlantic as well as on the European continent. It shows how far in advance Great Britain is of all other countries in measures of public health. In Canada and the United States, where many hundred emigrants land every week, it is of vital importance that efficient means should be at the command of the quarantine officials to deal with the disease. The chief means for this purpose are an abundant supply of pure water together with the most modern apparatus for disinfecting clothing, bedding, etc. At Grosse Isle we have neither. It is now several months since cholera made its appearance in Europe, and, in spite of the timely warning, the Government at Ottawa have practically done

nothing to save the country from the dreaded scourge. Halifax and St. John are, by all accounts, as badly prepared for dealing with the disease as is Grosse Isle.

On more than one occasion the Government's attention has been called to the inefficient means for stamping out the disease, but all to no purpose. The Medico-Chirurgical Society of Montreal, fully recognizing the terrible consequences that may result from the apathy of the Federal authorities, have appointed a committee to urge upon them the necessity of at once placing all the quarantine stations in the Dominion in a position to deal satisfactorily with any cases that may arrive on our shores. No matter how efficient a quarantine station may be conducted, it is no certain barrier against cholera. It is only the first line of defence. It can only be successful when all passengers are refused admission who come from infected districts. The Central Board of Health of this Province, being convinced of the imminent danger threatening the whole country, and having no confidence in the Federal authorities, took matters into their own hands, and, by virtue of the power granted them by the Government of the Province of Quebec, have declared all Provincial ports closed to emigrants and all passengers from infected districts. This drastic measure will probably save Canada from an invasion of cholera during the present season. In view of the great danger the action is justifiable. Had we competent Federal and municipal authorities to look after the general and local health it would be unnecessary; but lacking these, our commerce must suffer. We will be fortunate in escaping with only a commercial loss.

THE TREATMENT OF ASIATIC CHOLERA.

During the prevalence of Asiatic cholera it is of great importance that even the mildest diarrhœa should be carefully treated. We cannot tell in any case whether it may not be soon followed by all the pronounced symptoms of the severe disease or not. Asiatic cholera is usually preceded by a diarrhœa lasting in some cases a few hours, and it may be some days. In cholera morbus we seldom have a premonitory diarrhœa, this disease set-

ting in suddenly with great severity. For the premonitory diarrhœa, a carefully restricted diet and rest in bed should at once be enforced. A combination of opium with a mineral acid has always been, and is still, looked upon as the most efficient medicinal means,—either dilute sulphuric or hydrochloric acid with tincture of opium or solution of a morphine salt. If the lower portion of the intestines is the seat of the catarrhal state, then injections of tannic acid,—half an ounce of the latter dissolved in about a litre of water (previously boiled) at a temperature of 95° to 100°F. It is claimed by Cantani that tannic acid has a direct germicide action.

When we have to do with the fully developed disease, our treatment is mainly symptomatic, for up to the present there is no evidence that we have any reliable measure to cut short its course. There is no end to the number of remedies that have been recommended as having a directly favourable action on the course of the disease. Recently salol has been recommended by Lowenthal on experimental evidence as of value in directly inhibiting or preventing the growth of the cholera spirillium. A physician in the Phillippine Islands reports that in fifty-three cases of cholera treated by salol only three proved fatal. He recommends, first, doses of thirty grains, to be followed by hourly doses of seven grains. Carbonic acid gas introduced per rectum has also been recently tried, and with success it is said. The old treatment with calomel is worthy of mention in this connection. As calomel, to some extent, undergoes transformation into sublimate in the intestines, it is plausibly inferred that whatever benefit accrues is from the antiseptic effects of the latter. A gaseous disinfectant would probably be more efficient than one in any other form. The resisting power of the cholera spirillium is lower than that of any of the other infectious diseases, hence it is not altogether a hopeless task to look forward to the time when by some disinfectant we may be able to destroy the spirillium in the intestines, before it has generated those toxines which lead to the profound and fatal changes in the central nervous system.

In the *Medical News* for Sept. 10th, Osler has an article on the diagnosis and treatment of Asiatic cholera, and from this

we quote what he says on the symptomatic treatment of the disease:

1. Relieving the collapse by hot stimulants, as tea, coffee, brandy, and the external application of heat in various ways. The hot bath should be tried.

2. Checking the vomiting. Cracked ice and champagne, creasote, hydrocyanic acid, menthol, and other means may be tried.

3. Checking the diarrhœa. There can be no question that the collapse is directly due to the diarrhœa, and yet it is probably an effort of Nature to get rid of the poison. Indeed, an evacuant treatment has been urged by Johnson, who advises the use of castor-oil; but the general opinion runs strongly in favour of the use of remedies to check the profuse discharges. Various combinations of opium and ether are employed, with or without astringents. Morphine, hypodermatically, is of the greatest value for this purpose, and is to be preferred to opium by the mouth if the vomiting is obstinate. It has the advantage also of quickly relieving the pains and allaying the terrible restlessness. Lactic acid has been strongly recommended by French physicians.

Two special measures may be given a thorough trial, namely, *hypodermatoclysis* and *enteroclysis*. The former Cantani urges upon the following grounds:

"1. The death of cholera patients supervenes either by asphyxia in the algid period or in consequence of a tumultuous reaction in the typhoid stage, because the organism, through diarrhœa and vomiting, has lost a very large quantity of its aqueous constituents, and has retained or cannot longer eliminate the excrementitious materials—the products of combustion and decay—on account of suppression of the functions of the kidneys.

"2. Recovery occurs when absorption is resumed, in the intestinal canal, of the fluids which furnish to the blood and to the tissues the water which is indispensable to them."

The formula which he advises is as follows:

℞ Sodium chloride, - - 80 grammes.
Sodium carbonate, - 6 "
Boiling water, - - 2 liters.

With a fountain-syringe and the canula of an aspirator, from one to two liters of the fluid is allowed to flow gently beneath the skin of the flanks. The tumour formed by the fluid is slowly rubbed away. He advises the warm bath in conjunction with

the infusion. The operation may be repeated in two or three hours.

Enteroclysis is even more warmly recommended by Cantani, a mixture of laudanum and tannic acid being employed. The following is the procedure: "If a slight attack of a seemingly simple diarrhœa does not yield at once to rest in bed and the administration of a dose or two of warm infusion or chamomile, to which chlorodyne or laudanum has been added in proper quantity, then recourse should be had, without loss of time, to the warm enteroclysis of tannic acid. This enteroclysis is essentially an injection into the colon, per rectum, of a considerable quantity of warm water holding in solution a certain percentage of tannin. The rectal syringe, by means of which the injection is made, is furnished with an elastic tube three meters in length, with a nozzle at the free extremity and a cock at the proximal end. With such an instrument, not only the whole length of the colon can be filled with the desired fluid, but also not infrequently a quantity can be made to pass beyond the ileo-cæcal valve into the small intestine.

"The tannic solution recommended by Cantani is constituted for an adult as follows:

℞ Boiled water or infusion of chamomile, warm, - 2 liters.
Tannin, - - - - - - - 5 to 10 grammes.
Laudanum, - - - - - - 30 to 50 drops.
Powdered gum arabic, - 50 grammes.

"The temperature of the mixture and the quantity to be injected should vary according to the age of the patient and other circumstances, in the judgment of the physician. The most convenient time for administration of an enteroclysis is immediately following an evacuation." (Shakespeare.)

MATTEISM.

This is a form of quackery which has assumed large proportions in England and the continent. Count Mattei professed to cure cancer "without the knife" by means of lotions and bottled electricity of various colours. Mr. W. T. Stead, in the *Review of Reviews*, and Lady Paget in another periodical, made strong representations in favour of the method, and in response to their representations a committee of investigation was formed by the British Medical Association in the early part of last year. This committee consisted of the late Sir Morell Mackenzie, Mr. Law-

son Tait, and Dr. G. W. Potter. Five cases of cancer were treated by the Matteists, under the supervision of the committee, for one year, at the end of which time all had progressed exactly as if no treatment had been used. Dr. Potter made a full report of the proceedings, which is published in the *British Medical Journal*, No. 1650. He says: "What are the medical aspects of the Mattei treatment? There are no medical aspects of any kind. Matteism, in the deliberate judgment of the committee, consists exclusively of vulgar, unadulterated, unredeemed quackery." The electricities, on being analysed, gave no other reaction than that of distilled water, and the therapeutic test coincided with the analysis. The Matteists were allowed to take complete charge of the treatment, the consent of the patients having been obtained after fully explaining the matter to them, and advising them to seek surgical interference. Finally, seeing that the cases were rapidly becoming worse, the quacks turned tail and, figuratively speaking, ran as fast and as far as their legs would carry them. Thus another "sure cure" bubble is pricked and collapses, as far as the scientific world is concerned.

THE LEAGUE AGAINST CANCER.

A committee has been formed in Paris to organise, under this name, a society, the object of which is to collect information on the subject of cancer and to stimulate research for the advancement of our knowledge of this disease, about which so little is known. The officers are as follows: Hon. President, M. Verneuil; President, M. Duplay; Vice-Presidents, M. Trasbot, M. Straus, M. Metchnikoff; General Secretary, M. Paul Reclus; Secretary for surgical department, M. Ricard; Secretary for medical department, M. Brault; Secretary for experimental and pathological department, M. Cazin; Secretary of Committee, M. Rochard; Treasurer, M. Masson. An address has been prepared setting forth the aims of the society and the means it is proposed to make use of in order to attain them. Inquiries, communications and subscriptions are to be addressed to M. Masson, 120 Boulevard St. Germain, Paris. Meetings will be held periodically, and the proceedings will be published. As

the funds allow, prizes will be offered to encourage workers, and grants of money to carry out particular researches.

CANADIAN MEDICAL ASSOCIATION.

The twenty-fifth annual meeting of the Canadian Medical Association will be held in Ottawa on Wednesday, Thursday and Friday, 21st, 22nd and 23rd September, under the Presidency of Dr. John L. Bray, of Chatham, Ont. Arrangements have been made with the G. T. and C. P. Railways whereby members may obtain return tickets for one fare and one third. Members and delegates must procure certificates from the station agent at place of departure.

Judging from the number of members and delegates who have signified their intention of being present, the meeting to be held in Ottawa will in all probability be a very successful one.

Members desirous of contributing papers will kindly communicate with the General Secretary (Dr. H. S. Birkett, 123 Stanley Street, Montreal) at as early a date as possible. Appended is a partial list of papers:—

Address in Medicine:
"The Treatment of Pulmonary Tuberculosis"—Dr. J. E. Graham, Toronto.
To be discussed by Dr. Prevost, Ottawa.

Address in Surgery:
"Observations on the Progress of Surgery in our own Day"—Dr. Donald MacLean, Detroit, Mich.
To be discussed by Dr. V. H. Moore, Brockville.

Address in Obstetrics:
To be discussed by Dr. Harrison, Selkirk.

Gastro-Enterostomy—Dr. L. McFarlane, Toronto.

Chronic Bright's Disease—Dr. McPhedran, Toronto.

Intussusception and its Treatment by Operation—Dr. F. J. Shepherd, Montreal.

Treatment of Abortion—Dr. K. N. Fenwick, Kingston.

The Management of Goitre—Dr. Dupuis, Kingston.

Uric Acid in Children—Dr. A. D. Blackader, Montreal.

Diseases of the Naso-Pharynx associated with Ocular Affections—Dr. Buller, Montreal.

Prostatectomy—Dr. Geo. E. Armstrong, Montreal.

Appendicitis—Dr. H. P. Wright, Ottawa.

Biological Analysis of Some Canadian Water Supplies—Dr. Wyatt Johnston.

Unrepaired Laceration of the Cervix the most Common Cause of Epithelioma of the Cervix Uteri—Dr. Lapthorn Smith, Montreal.

Case Illustrative of the Influence of Diseases of the Female Generative Organs upon the Visual Apparatus—Dr. Ryerson, Toronto.

(1) Two Early Deaths from Gonorrhœa } Dr. H. H. Chown,
(2) Enterectomy for the Cure of Fæcal Fistula } Winnipeg.

An Epidemic of Morbilli Hæmorrhagici—Dr. C. J. Edgar, Sherbrooke.

Hemorrhage in the New-born—Dr. F. A. L. Lockhart, Montrea'.

(1) Administration of Chloroform and the Dangers incident thereto.
(2) (*a*) Phlebitis of the Left Femoral Vein caused by an Embolism coming on three weeks after Hysterectomy. (*b*) Aneurism of the Abdominal Aorta—Dr. J. D. Balfour, London.

.....—Dr. A. E. Praeger, Nanaimo.

(1) Notes on Eye Lesions consequent on Nasal Affections.
(2) Traumatism of the Labyrinth—Dr. Geo. Baptie, Ottawa.

Papers have also been promised by Sir Jas. Grant (Ottawa), Dr. Mullin (Hamilton), Dr. George McDonald (Calgarry), and Dr. Johnson Alloway (Montreal).

A special general meeting of the Association of Medical Officers of the Militia of Canada will be held during the session of the C.M.A.

—The following is taken from *The Clinical Reporter* for August 1892. On its title page it informs us that it is "a journal of homœopathic medicine and surgery." We give the article as it stands without any comment:—

"THE ADJUVANT HUMBUG.—In homœopathic practice, 'adjuvants,' like charity, 'cover a multitude of sins,' though to the observant eye the covering is indeed gauzy. In a late issue of one of our homœopathic exchanges we find several writers recommending as 'adjuvants' to the indicated remedy the use of means entirely unhomœopathic. If this thing goes on much farther, we shall soon see reports of malarial intermittents cured by the 30th of natrum mur. with 20 grains of quinine as an 'adjuvant.' We are not going to deny the propriety of using rest, dietetics, exercise, massage, heat, cold, etc., etc., as adjuvants in many cases, but we insist that the application, by inunction, spray, or otherwise of crude drugs in large doses cannot properly be called an *adjuvant* to the internal supposed-to-be-homœopathic remedy. Let us be honest and cease fooling ourselves and thinking that we are fooling others by the use of the term *adjuvant* in such cases. Let us be thoroughly homœopathic if we can, but, in any event, let us be honest, and if, through the imperfection of our knowledge of homœopathic therapeutics, or through any hiatus in the materia medica itself, we are unable to exactly fit the remedy to the pathological and symptomatic

conditions and therefore resort to other means, let us say so openly and not make ourselves and homœopathy ridiculous by speaking of allopathic methods as 'adjuvants' to homœopathy."

—We are in receipt of the prospectus of the London Post-Graduate Course, which was founded in January, 1890, in order to increase the opportunities for clinical instruction in London for qualified members of the profession, and also with a view to extend the usefulness for teaching purposes of those hospitals to which there is no medical school attached. During the winter term (October, November and December, 1892), instruction will be given by members of the medical staffs of the following hospitals: The Hospital for Consumption and Diseases of the Chest, Brompton; the Hospital for Sick Children, Great Ormond street, Bloomsbury; the National Hospital for the Paralysed and the Epileptic (Albany Memorial), Queen Square, Bloomsbury; the Royal London Ophthalmic Hospital, Moorfields; the Hospital for Diseases of the Skin, Blackfriars; Bethlem Royal Hospital for Lunatics; the London Throat Hospital, Great Portland street; and at the Bacteriological Department, King's College, and the Parkes Museum. Also a course of lectures and demonstrations on Morbid Anatomy, and a course of lectures on Midwifery and Diseases of Women, will be given at 101 Great Russell street, Bloomsbury; and a course of clinical lectures on Medicine and Surgery will be given at the Central London Sick Asylum, Cleveland street, W. The following are among those who will give lectures during the course—Dr. Gowers, Mr. Jonathan Hutchinson, Mr. Bryant, Mr. Holmes, Dr. Braxton Hicks, Dr. Percy Kidd, Dr. C. Y. Biss, and Mr. Victor Horsley.

Obituary.

THE HON. LEVI RUGGLES CHURCH.

Levi Ruggles Church was born in Aylmer, Que., in 1836. He was the son of Dr. Peter Church, and the grandson of Jonathan Mills Church, a U.E. Loyalist, who, having been taken prisoner in 1777, made his escape and came to Canada. The late Mr. Church intended to follow his father's profession, and

after passing through Victoria University, Cobourg, he graduated in medicine at Albany, and also at McGill in 1857, taking both the primary, final and thesis prizes. He then studied law, and was called to the bar of Lower Canada in 1859. He was named a Q.C. in 1874, and made Attorney-General in the same year. In 1887 he was called to a seat in the Court of Queen's Bench, which he was compelled to resign about a year ago on account of ill health. Though practising law he was elected a governor of the College of Physicians and Surgeons of Quebec. He died at his home in Montreal at an early hour on Tuesday, Aug. 30, 1892. He held a high position at the bar, and as a public man had won an enviable and honourable reputation for ability and uprightness. On the bench he was a careful, painstaking and clear-minded judge.

—W. H. Henderson, M.D., Professor of Clinical Medicine at Queen's University, died at Kingston, Aug. 13, 1892, aged 35.

—Dr. J. A. Laramee, professor in the Medical Faculty of Laval University, died Sept. 12, 1892.

—William Dalla Husband, F.R.C.S. Eng—a member for fifty years of the British Medical Association, a former President, President of Council, and Treasurer—died on July 18th, after more than three years of painful illness, and leaves behind him a gap in the ranks of the friends of the Association which can only be filled with difficulty. As a surgeon, Mr. Husband took high rank in and around the city of York, and for many years he was looked up to as the leading medical man of the neighbourhood.

Personal.

—Jas. Stewart, M.D., Professor of Clinical Medicine, McGill University, has returned from the Continent.

—Drs. T. G. Roddick and T. Johnson-Alloway have returned to town, having been away attending the meeting of the British Medical Association at Nottingham, England.

—R. A. Bowie, M.D. (McGill, '91), has been admitted a licentiate of the Royal College of Physicians and a member of the Royal College of Surgeons of London.

—A young Italian girl was amusing herself with a small trumpet three centimetres long, when the instrument was drawn into the trachea; during three days each inspiration produced a sound which could be heard at a distance of 15 metres. Death in 23 days; at the autopsy the trumpet was found in the right bronchus.

—Sulphur is alleged by the homœopathists to effect the cure of a cutaneous affection, on the principle that like cures like. Perhaps they argue that, as sulphur is a cause of the eruption of Mount Vesuvius, it is similar in its nature to that morbific agent which occasions a peculiar breaking-out of the skin.—(*Punch.*)

Eighteen Days of a Temperature of 46°C. (114.8°F.)—Dr. Obelar has reported a temperature of from 45° to 46°C. in one of his patients. This temperature was carefully verified, and lasted for eighteen days before death.—*Union Médicale du Nord-est.*

A Victim to Professional Duty.—The *Wratch* gives the following details of the assassination of Dr. Moltchanoff at Kwalinsk, due to the troubles caused by the appearance of cholera in that city. Our *confrère* was about to leave for St. Petersburg to take charge of the cholera hospital. When the riots first began, in spite of the advice of his friends who implored him to leave, Moltchanoff, thinking it his duty to remain, stuck to his post. He performed his duties until the 30th of last month (July), when the first band of rioters arrived, loudly demanding his head. They had nicknamed him Dr. Cholera and accused him of having undertaken by a bond, in consideration of a sum of money, to poison the water supply of the city. With difficulty the doctor saved himself on horseback and took refuge in the house of a friend, where he was betrayed by the servants. The mob surrounded the house and threatened to burn it, when, to save his host, Moltchanoff gave himself up to the rioters. Three priests who interfered to save him were half killed by the crowd, who then subjected the doctor to a long martyrdom. They threw him on the pavement and stamped on him and kicked him, while the women attacked him with stones and hammers until the body was not recognizable. Even then they kept guard so that it should not be removed. The government has granted a pension to the widow and children.