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THE  
MONTREAL MEDICAL JOURNAL.

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VOL. XXIX.

OCTOBER, 1900.

No. 10.

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Original Communications.

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THE ADDRESS IN SURGERY.

BY

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*Delivered before the Canadian Medical Association, Ottawa, September 18th, 1900.*

TUBERCULOUS LESIONS FROM A CLINICAL POINT OF VIEW.

*Mr. President and Gentlemen,*—Though the substance of the address which I have the high honor of presenting to you to-day may entirely fail to arouse in you any measure of satisfaction, yet I think I may, at any rate, claim your kind appreciation for its title. For it gives you the assurance that I am not going to ask you, even in your imagination, to pass any of this September day in that gloomy room in which Death is made to deliver up his grosser secrets; nor in that other place where, in an atmosphere of methylated spirit and oil of cloves, you are accustomed patiently to endeavour to unravel the tangled threads of morbid tissues. My remarks will deal with tuberculous lesions as the surgeon meets them day by day in hospital ward and operating theatre, and in private practice. And if I shall find occasion to ask you to go beyond these spheres, it will be to take you to some of those beautifully-placed convalescent institutions in which, when full of gratitude for having triumphed over the distress of chronic disease, or the risks which are inseparable from its operative treatment, and when full of the hope of permanently improved health, the tuberculous patient spends possibly the very happiest weeks of his life.

It is, I make bold to say, a good and wholesome thing for a surgeon now and then to get clean away from pathologists and morbid histolo-

gists—to play truant, as it were, from his unbending schoolmasters. In recent years there has been, perhaps, too much inclination to apotheosize the morbid anatomist. His brow has been decked even with roses, and now standing high in his suit of sable, he looks upon the clinical surgeon as if his chief duty were to supply him with material.

In the title of my address are the words “from a clinical point of view,” and desiring to emphasize the fact that the word *clinical* related solely to remarks made and work done in the sick-room and in the theatre, I thought it well to call attention to its exact meaning, but on looking it out in “Liddell & Scott,” I found to my dismay that *κλινη* was not only *that on which one lies, a couch or bed*, but, secondarily *a bier*. I confess that the discovery somewhat disconcerted me. If a *bier*, why not a *mortuary table*? At any rate, the word *clinical* is of wider signification than I supposed it to be; so that the pathologist might have right on his side when he claimed that clinical instruction, begun at the bedside and carried, perhaps, into the operating theatre, is not actually complete until he has written the epitaph.

Even on this side of the middle of the dying century, institutions were in existence in which much pathological work was actually done within the walls of the hospital itself. This, of course, we know to have been quite wrong. But surely we have now gone to the other extreme: the pathological laboratory is constantly getting further and further away from its source of supply. The pathologist is no longer a practitioner of medicine, his interest is not in the *case* but in the *subject*. Like the carpenter, he does not interest himself in *living* material; his thought is only for dead tissue. The surgeon sees the human tree during its life (and perhaps helps to fell it), but he now, unfortunately, rarely follows it off his estate. So with the student; he does his clinical surgical work at one time and in one place, and his pathological work at another, and he is unable, I regret to say, to follow any individual case, or any part of it, straight from the ward to the laboratory.

The present arrangement is, of course, incapable of alteration, but it is an unfortunate one for the student; and on his account it behooves the surgeon to do all that he can towards welding the pathological details of his case with the clinical features, so as to represent to his class that the two aspects are inseparable and ought always to be considered together. If, for instance, he is demonstrating a tuberculous knee-joint, he should, whilst discussing the clinical features of the case, explain precisely the histological changes that are taking place; and supposing that a resection or amputation is eventually resorted to, he should show in what respect the morbid conditions harmonize with, and in what respect they differ from, the account which he predicted. He

should, as far as possible, make his teaching independent of his colleague in the laboratory, for the specimen which the latter takes out of a jar of formalin or alcohol, is no more like the real condition as it exists in the wards than canned salmon is like a fresh-run fish.

The clinical surgeon has of late, I think, been a little too much under the influence of the experimental pathologist and bacteriologist. When some important surgical problem awaits a solution which cannot be effected in the ward or on the operating table, the clinical surgeon turns to his enthusiastic and obliging friends in the laboratories, who in order to help him, straightway proceed with careful thought and gentle hands to sacrifice upon the altar of Hygeia some mongrel curs or a few of those tailless rodents which, so far as I can see, have been provided solely for the use of the experimental physiologist and pathologist. Then, because such and such a thing happens under such and such circumstances in the laboratory to the dog or guinea-pig, the experimental pathologist is apt to assume that in different circumstances it must happen also in man himself!

When in due course the pathological and bacteriological Athanasius formulates his creed, I am afraid that I shall be burned at the stake. But in saying this I trust that no one will jump to the conclusion that I would stop experimental research. Indeed, I think it absolutely necessary, and I am strongly of opinion that the life of a man is of more value than that of many sparrows (or guinea-pigs), and that the clinical surgeon is deeply indebted to the experimentalist for much invaluable collaboration. But if there is one matter more than another in which the work of the experimentalist has led to faulty generalization from a clinical point of view, it is with regard to the course of certain tuberculous lesions.

No one will think, I trust, from what I have said, that I would underrate the work of the experimental pathologist; it certainly is not so, for I well know that it is to these workers that we owe our knowledge of the precise cause of diphtheria as well as of tuberculosis, of tetanus and erysipelas, and of many other serious diseases. And knowing the cause we have been enabled in many cases greatly to influence the course of the disease by treatment. Indeed, it would be almost impossible to over-estimate the practical value of experimental laboratory work both to the profession and to the public. Nevertheless, there are some of the public who, in their ignorant well-meaning and in their well-meaning ignorance, would once and for all stop such beneficent research. But stranger still, there are some members of our own profession in England who also try to get in the way of scientific progress. Fortunately, however, they have not the power of doing much harm!

Not long ago we used the words "strumous" or "scrofulous" when we were in a surgical corner; but to-day these indefinite terms are deleted from our nosology; indeed, they are without scientific meaning, and we now call *tubercle* by its proper name, our patients reaping the benefit of our greater precision.

From the medical point of view an unusual amount of attention has lately been drawn to the subject of tuberculosis by means of excellent societies which have recently been organized to carry on a never-to-be-ended and universal warfare against the disease. Taking its birth upon the Continent, the scheme has now received a considerable amount of support in Canada, in the United States, in England and elsewhere, and its effect cannot be but for good. Indeed, I believe that its influence must be already becoming felt.

### THREE IMPORTANT FACTS.

There are three great facts in connection with tuberculosis of which the public must be made fully conscious:

The first is that the disease is *communicable*. The truth and importance of this fact we have ourselves only of late entirely realized. The public, therefore, must be allowed a due amount of time before they generally accept it. But accepted the fact must be, and it behooves each one of us to do all that he can towards promoting its acceptance.

The second is that the disease is *preventable*. This follows almost as a corollary to the previous statement, and when the truth of it becomes widely and fully understood, how great will be the responsibility of those who wilfully disregard it!

The third fact is that the disease is *curable*. And as we are to-day considering certain surgical lesions of tuberculosis from a clinical point of view, I shall seize this opportunity of entering somewhat fully upon the question of curability.

### THE CURABILITY OF TUBERCULOUS LESIONS.

A few years ago tuberculosis was regarded as a well-nigh incurable affection, for the word had been chiefly reserved for hopeless cases of pulmonary consumption, and of meningitis complicating certain chronic diseases. To call a surgical lesion, therefore, *tuberculous* was tantamount to signing the patient's death-warrant. It was in the public estimation a term of definite import and of dreaded omen. But among the many uncertainties of our professional environment, one thing has of late become quite certain, namely, that tuberculosis is not necessarily of the intractable nature that it was formerly considered to be. So far as my practical acquaintance with the disease is concerned—and I have worked at a large general hospital and at the largest children's hospital in

London for a quarter of a century—tuberculous lesions are exactly what they used to be. But we know much more about them than we did, and careful clinical study and microscopical and experimental work in the laboratory have enabled us to treat them more successfully, and, therefore, to warrant us in taking a much more hopeful view of them. But I would like to know if the surgical lesions of tuberculosis which are met with in your dry, bracing climate are just as we have them in Western Europe. Many of you have studied tuberculous lesions under your own bright skies and also in the Mother Country, whose borders are washed by the seas and whose life is so greatly influenced by the Gulf Stream. From your cradle you have been taught that the sun never sets on the Empire of our dear Sovereign Lady, but I am afraid that when some of you have come over to us in a bad season you have wondered if there are not parts on which it never rises. Well, do you find that tuberculous lesions are exactly the same clinically in the two hemispheres? Every country has a climate, just as it is said to have a form of government, which is equal to its deserts. Ours is a damp climate, which exactly suits the soil and the race; but it is a bad one for the unhappy individual in whose blood the bacilli of tuberculosis are lurking, as well as for those who by heredity or surroundings have acquired that condition of tissue which renders it vulnerable by the mean bacilli of tuberculosis and adapts it for their cultivation.

Sometimes when I have been going round my wards I have asked a visitor to note how large a proportion of the cases are tuberculous. Is it thus also in *your* surgical work? Do chronic tuberculous affections of the hip, knee, spine, lymphatic glands, shoulder, elbow, foot and hand represent a very large proportion of the lesions which come under treatment by the general surgeon? Have you, in proportion, just about as much tuberculous disease in Canada as we have at home; and does it take the same course? Whilst I am here I would particularly wish to see tuberculous cases and to be informed on these points.

Much of my clinical work has lain amongst senior students; I come in contact with them just as they have left the laboratories and are proceeding to put what they imagine to be the "finishing touches" upon their professional education. They have spent many delightful hours in a pathological laboratory and in a white cotton smock; they have cultivated, studied, and even tamed bacilli; they have seen how potent they may be for evil, and they are firmly of opinion that if once such germs gain access to a suitable spot in a suitable individual, nothing short of the most vigorous surgical measures can suffice for the eradication of the disease and for the emancipation of the host. This is the students' bacteriological faith, and except they act up to it their patients cannot.

be saved. Many young practitioners also hold that faith. Where do they learn it? Not in clinical surgery. The public have also begun to believe it: but the public will believe anything that they are told if only they are told often enough. And if the statement is couched in semi-scientific or mysterious phraseology, they seize upon it with all the greater avidity. Otherwise, how would bone-setters, vendors of patent medicines, and other quacks, qualified and unqualified, flourish like a green bay-tree in the sunny corner of an arboretum?

But is the outlook in advanced tuberculous disease necessarily so hopeless in the absence of active surgical treatment? To answer this very important question I will instance an imaginary case of a young man, who, a year or so previously, hurt his back in a fall at a gymnasium. He has now pectoral neuralgias, and dull pains between his shoulder blades and in his back, which have probably been ascribed to "rheumatism." Eventually the discovery is made that the third and fourth dorsal spinous processes are unduly prominent, and it is evident that the bodies of those vertebræ have undergone complete tuberculous disintegration. The disease is close behind the arch of the aorta, and the surgeon is unable to get at it. He cannot scrape it and he cannot irrigate it with germicidal lotions. I believe that there are some surgeons who would attack it if they could: *rien n'est sacré pour un sapeur*; but, fortunately, he cannot possibly get at it. What then is to be the future of this patient? Is he going to die the death as the guinea-pig would in the laboratory? Most certainly not. He is to be made to lie about, in the sun if possible, and he is probably going to get well. Everyone here has acquaintance with such an individual, or if he does not know him personally he has seen him in the street. He is rather a short man with peculiarly high, square shoulders, and with a boss between them. And not only has he long since outgrown his tuberculous disease without any operative assistance whatever, but could we see him in his own home we might not improbably find him—and I say it with some regret—surrounded by a crowd of apparently healthy sons and daughters.

Such a case is one of great clinical importance: it shows that a man with an undoubted tuberculous lesion of the first magnitude can completely recover without having undergone any operative procedure whatever. At the end of the nineteenth century it is somewhat unusual for any patient with any surgical affection to be allowed the opportunity of showing what he can do without submitting himself to operation, so that such an account as that which I have just instanced; becomes not only important but actually interesting. One rarely hears or speaks now of the *vis medicatrix naturæ*: surgical zeal has apparently rendered it not only obsolete but superfluous.

Another instance of the favorable course which undoubted and severe tuberculous disease may run without active surgical interference, is seen in the case of old-standing hip-joint disease, the boy actually "growing out of his trouble." The disease, let us suppose, began at that period of life when it is customary to send a boy to school, and his school-life was frequently interrupted and was continuously clouded by the affection. But he is now a young man at college, and though he walks lame and is precluded from taking an active part in athletics, still he is vigorous, and he has evidently and completely triumphed over his disease. I am not sure that I have in clinical work ever before used the specious expression, "growing out of a disease"; and possibly I might not do so now if I thought that there were any students or unqualified persons present, for its adoption might prove unfortunate or even dangerous. It is a rather favorite expression, however, amongst parents and other ill-informed persons when confronted with a child with a tuberculous lesion. Would they expect a garden to grow out of its weeds or a field out of its thistles? No; it is a popular superstition, but, like most erroneous beliefs, it is founded on a substratum of truth. For, as a matter of fact, many patients do "grow out of" tuberculous disease, and, strange to say, sometimes most markedly so after a surgeon has made the clear pronouncement that without operation recovery is quite impossible. A boy, for instance, has chronic tuberculous and suppurative disease of his tarsus; he is albuminuric and very ill. His able young surgeon says that unless his foot is removed the boy will die. This, of course, is a very unwise thing for any surgeon to say, for he cannot possibly know for certain exactly what is going to happen. But what *may* happen is this—the operation is declined; the child is put under the care of another practitioner who, though not so clever a surgeon, is, perhaps, older and a better man-of-the-world. By good luck rather than by good management the disease clears up, and in a couple of years' time the boy is walking about with scarcely a limp. "See that boy?" says the proud father. "Well, Dr. Omniscient wanted to cut off his foot, but his mother and I would not let him!" According to the rules of the game the foot, of course, ought to have been amputated; but Nature does not always play according to the rules, as the young practitioner sometimes finds out to his cost. *Knowledge* is the prerogative of youth, but *wisdom* should come with years.

I am aware that I have wandered from that case of chronic hip-joint disease: I was instancing it merely to say that though the head of the thigh-bone and the socket in which it worked have been quietly destroyed by a growth of tuberculous granulation-tissue, so that the limb is greatly shortened, still it is now, years afterwards, solidly fixed and fairly ser-



viccable. The skin has remained unbroken and the man (for he is a man now) has completely triumphed over his disease.

In connection with this little batch of reports I would like to make a few disconnected statements, chiefly from a clinical point of view:

1. Chronic inflammation of a joint in a child or young person is always tuberculous—except in those very rare cases in which it is due to hereditary syphilis or osteo-arthritis.

2. Tuberculous inflammation may completely destroy a joint, and then leave it solidly and soundly synostosed, without the surrounding tissues or the skin having been implicated, as in *caries sicca*.

3. If tuberculous granulation-tissue breaks down into a fluid, that fluid is not *pus*, and the collection is not, properly speaking, an *abscess*—unless, by bad fortune or by worse surgery, it has become infected by septic micro-organisms.

4. The fluid collection is not to be treated as an abscess—by incision and drainage, that is—but is to be opened and emptied, and scraped and cleansed of its unhealthy lining of granulation-tissue. Then the wound in the skin is to be completely closed by sutures; firm pressure is to be evenly applied, and the part is to be kept absolutely at rest—by a splint if practicable. It is no news to most of you to be told that the success attending this line of treatment leaves, as a rule, little to be desired, or that for this important advance in practical surgery we are chiefly indebted to the patient researches of our friends with the smock frocks and the guinea-pigs.

5. I have failed to discover that iodoform is of any peculiar value in the treatment of tuberculous lesions. At any rate I have long since discarded it, and I have not noticed any falling off in the results of my practice in consequence. Iodoform is an irritant and a poison; it is apt to be septic, as germs can grow upon it, but I have no knowledge of the truth of the statement that mushrooms have actually been cultivated on it.

Some time since a lady was sent to me for my opinion about a tuberculous ulcer of the anus which a practitioner had long been treating with iodoform. She earnestly begged me to consider if I could not recommend some other local application, as she said that the smell of the yellow powder rendered her “socially objectionable.” This was for her a very serious matter, as she kept a fashionable boarding house, and whilst many members of her household seemed to notice the peculiar odor, some few of her young men “paying-guests” actually appeared to recognize the drug itself.

I confess that I have a sort of feeling of sorrow for a surgeon who thinks that he cannot successfully carry on his practice without iodo-

form, just as I have for the lady who deems patchouli to be indispensable for her toilet.

That tuberculous lesions often get well without surgical assistance, and sometimes even without their serious nature ever having been suspected by either surgeon or patient, is now a matter of common knowledge. It often happens that when a surgeon is examining an individual, for one purpose or another, he comes across unmistakable evidence of tuberculous lesions which have undergone permanent cure. It may be that an elbow or wrist is found synostosed; that a white scarring of the skin shows where a patch of lupus has undergone spontaneous cure, or that a small and shortened finger or toe gives evidence of a quiet, long-forgotten, tuberculous dactylitis.

#### THE FORCIBLE STRAIGHTENING OF CARIOUS SPINES.

The direct treatment of the angular deformity, resulting from tuberculous disease of the spine, is a subject that a few years ago was thrust somewhat vigorously upon us, not only by articles in the medical papers, but by the reproduction of photographic representations of ghastly clinical procedures in the pictured journals of the lay press. This is hardly the way in which one would expect solid surgical work to be advanced. One remembers that there was a somewhat similar outburst in the lay press, a few years ago, when the Koch treatment of tuberculosis was being boomed in Berlin. For this, however, the illustrious Koch must not be held responsible; he was forced into bringing forward his work before he had been able to assure himself that the results of his injections justified them in being regarded as *curative*. Immediately there was a rush to the German capital, and medical men lent themselves and their names to lay journalism and their portraits to the illustrated papers, passing glad to obtain notoriety in such a beneficent, or at any rate in such a popular, movement.

I do not know how it may be with you, but in Western Europe every new method or invention is at once greedily accepted and not improbably made the means of unmistakable advertisement. It does not much matter whether it is to turn out a real success or not, the point seems to be to have one's name associated with it whilst it is on the crest of the wave. To have one's name in front—and, somehow or other, to keep it there—that is the problem with us; for, you see, the struggle for existence has of late become very keen in certain parts of the Eastern hemisphere.

I say that I do not know how it may be with you, but I hope and I think that in your peaceful Arcadia you can practise your profession undisturbed by many of the anxieties, struggles and temptations by

which your less fortunate *confrères* are sometimes well-nigh overwhelmed in an older country. And long may it so continue with you, not only for the good of your honourable profession but also for your own self-respect and happiness.

To affirm that the forcible straightening of carious spines must needs be unsurgical, simply because it is a reversion to the ways of the bone-setter, would be unfair, for the blundering bone-setter sometimes did good by chance. But, at any rate, he experienced none of that sense of responsibility which a surgeon must feel when he is proposing to straighten a tuberculous spine. It is obvious that in straightening the angle the tuberculous ulcer of the vertebra must be widely opened out, and that if the neural arches have been already cemented together, this rigid support must be broken across. And, supposing that this is done, and that the patient survives the risks, which are inseparable from the procedure, will the widened osteal ulcer duly heal and the neural arches again become solid? Possibly so. But—and this is the point—will there be no further recurrence of the hump?

Though I should be grieved to stand in the way of surgical advancement, I do not mind getting in the road and temporarily impeding traffic whilst we are taking time to consider the route, and are assuring ourselves that the stream of surgical practice is going in the right direction. My opinion is that the deformity of Pott's disease does not lend itself to operative treatment; that forcibly to interfere with it is to thwart Nature in her good attempts at affecting a curative consolidation in her own way—and Nature's ways, as a rule are not unworthy of our respectful recognition. I think, further, that in a short time we shall hear very little about the method. That is what I *think*; but I am absolutely *sure* of this, that if a child of my own had an angular deformity of its spine, no person on earth should be allowed roughly to meddle with it. This is the only trustworthy way of testing one's opinion concerning the therapeutic value of speculative methods of treatment, and when a surgeon is planning some new scheme of procedure it is a good thing for him to measure it out first with the Golden Rule—would he accept such and such a treatment for himself, for those nearest and dearest to him? But surely, after all, each one of us actually does this, though some apparently have greater belief in heroic measures than others. At any rate, let us not be precipitate or over-enthusiastic with respect to each untried method as it is introduced. *Festina lente.*

There is a small class of cases for which forcible rectification of the angular deformity may, perhaps, eventually be found very suitable, namely, in a certain few of those in which pressure by bone, or by organizing inflammatory deposits has taken place upon the anterior

surface of the cord, so that the patient has lost the power of voluntary movements in the lower extremities. In a few such cases, I might perhaps be eventually inclined to resort to forcible straightening rather than to a laminectomy, an operation of which, by the bye, I have but a poor opinion.

The humped back of spinal disease is, of course, an opprobrium, and it is small wonder that the surgeon is anxious to efface it. But if he had given proofs of such laudable anxiety at the beginning of his treatment of the case he would probably have had no hump to deal with. I have no hesitation in saying that, even at the present time, the treatment of spinal disease in its earliest stages is too often half hearted and sometimes actually blameworthy. It may be urged by way of excuse that at the very beginning of spinal disease the symptoms are so equivocal that the practitioner hesitates to even whisper his opinion lest the disappearance of the symptoms should suggest that after all he is an alarmist. He knew that the girl had symmetrical pains in her chest, belly or legs; he knew that she got easily tired at play, or that she was inclined to loll and lie about when others were full of activity, and that, regardless of nursery manners, she persistently sat at meals with her elbows on the table. He suspected spinal disease; he even told the parents that the girl should be kept quiet. He may actually have gone so far as to sketch out a plan of treatment which was designed to secure a certain amount of rest, but he was slack in seeing that even this small measure was carried out. In short, he had not the courage of his opinions. So the case was allowed to drift.

Oh, for the spirit of Lady Macbeth who called out to her weak-kneed spouse and fellow-practitioner :

“Infirm of purpose! Give me the dagger!”

I am a great admirer of Lady Macbeth though I am fully aware that her character is not faultless. She was not the sort of person, perhaps, to be trusted with the dissection of tuberculous glands from the neck, or of operating on a case of torticollis, but how splendid she would have been in the treatment of early spinal disease! There would have been no half-measures with her!

#### THE TREATMENT OF VERTEBRAL CARIES.

If a practical surgeon were asked, What is the proper treatment of early spinal disease? he would unhesitatingly say *rest*. Yes, absolute and uninterrupted rest. But there is only one way of insuring such rest for a child, and that is by making him lie flat in bed. As I shall set forth directly, he is not to be kept actually in bed all the time; but in every case the treatment is at any rate to be commenced by imprisoning him.

in a pillowless bed—not, let him clearly understand, if need be, as a punishment. This, I feel sure, is the only way of successfully inaugurating the treatment of *resl*. But it is of little use if, when in bed, the patient is allowed to roll about, sit up for his meals, or to hang over the side of the bed in order to pick up a dropped toy. The details of the treatment must be so seriously considered, and the medical man must make it his business to see that they are loyally and thoroughly carried out. He must not content himself merely with giving his instructions; the parents will very likely want careful looking after as well as the boy, or else as soon as the doctor has left the house, or at any rate after a short period of rest, the boy will probably be allowed to do pretty well what he likes, and so the case will quietly drift. What the circumstances demand is the presence of a sort of clinical policeman in the house in the shape of a hospital-nurse.

I know that there are all sorts of schemes, corsets, apparatus and braces (as my American friends call them) for treating spinal caries without keeping the child flat. But they are all wrong—wrong in theory and wrong in practice; and if they could be cast into the bottomless pit, and every case of spinal disease could from the beginning be treated by continuous rest in the horizontal position, there should be no more of those unsightly humps to invite speculative interference. Of course, I do not include in my anathema Phelps's box splint, the double Thomas's splint with head piece, or any form of cuirass which takes the child in bodily and keeps him flat. Indeed, the design of each one of them is well-nigh perfect; but what I want utterly and severely to condemn is the modern ambulatory treatment of spinal caries. Indeed, I think it probable that after all the stir about the new treatment of humpbacks by forcible straightening has subsided, a most important beneficial clinical outcome will be that every surgeon will feel himself compelled to be far more careful in the adoption of patient and efficient prophylactic measures in the early days of the disease.

As I look back through many years of active hospital practice, I cannot divest myself of the thought that the plaster-of-paris jacket-treatment, of which, I confess, I have been a warm advocate, must be held responsible for much of the existing deformity of Pott's disease. Many a time have I seen the angular projection coming on and increasing when the child has been getting about in a plaster-jacket or some other form of support.

Though the child is to be lying flat for six, twelve, eighteen or more months, he is not to be shut up in a close bedroom. The windows are to be kept open and he is to be carried out every day into God's blessed sunshine, which is as necessary for warm-blooded animals as for plants.

His muscles are to be maintained in good trim by massage, but he is to be kept all the time in a horizontal position. I know that in these days of activity and progress such unromantic treatment demands great confidence on the part of the parents in the judgment of the practitioner who insists upon it, but no little experience of it enables me with the utmost confidence to recommend it. Certainly it is not a new method. Hear what Sir Benjamin Brodie says upon the subject. This is the sentence at the very beginning of his valuable chapter on the *Treatment of Caries of the Spine*: "From the first moment, therefore, in which the nature of the case is clearly indicated, the patient should abandon his usual habits and be confined altogether on his bed or couch."\*

Naturally, one turns also to see what Percival Pott has to say upon the question of the treatment of the disease which bears his honoured name. And it is somewhat of a disappointment to find him so taken up with the subject of the *Palsy of the Lower Limbs* which follows destruction of the bodies of the vertebræ, that apparently he has not the inclination to discuss general measures. But it is all delightful reading, and even to-day it is brimful of clinical instruction. What a relief it is to read a chapter or two of Pott, or Brodie, or Chassaignac after one has been poring over the pages of some modern text-book, in order, as the saying is, to "keep abreast of the times!" Pott always seems to put his red velvet sleeve around one's shoulders and to draw one aside from the bustling crowd of the "busy practitioners" (in whose peculiar interest modern text-books are quaintly said to be written), and to talk to one in the delightful manner of those whose literary style has not been spoilt by the habit of counting words on telegraph forms, or of compiling "copy" of precise length, and in a limited time, for medical publishers!

However, Pott has a few remarks to make in a general way about the treatment of the latter stages of spinal disease, but I am afraid that they will not prove acceptable to most modern surgeons any more than my own poor remarks on that subject may do. Still, it is a great pleasure to know that one is in good company the while! Pott is talking about the treatment by "spinal-supports" and "steel bodices," and as I am telling you what he says I feel his velvet sleeve leaving my shoulders and actually passing around my neck. He says that though the use of these pieces of machinery is so general, and the vulgar prejudice in their favour is so great, he has long been convinced of their utter inutility; and, moreover, that he is satisfied their effects are mischievous.

Speaking generally, the acceptance of a simple, unromantic clinical method makes a far more serious demand upon the parents' or the patient's confidence, than does the bidding of him to do some greater

\* "Observations on the Diseases of the Joint," 1850, page 342.

thing. This is understood and acted upon by the quack, who, merely to create an impression, inserts in a lengthy prescription some rare and perhaps rubbishy ingredient which he thinks the apothecary will be unlikely to have in stock; who writes out a fussy dietary, with unworthy attention to detail, and who, having failed to effect the promised cure, endeavours to preserve an unenvied reputation by sending his confiding patient to some far distant watering-place. In spite of education, people love quackery now just as much as they did in the time of Elisha; and the higher they are in the social scale the more they seem to hanker after it. The brief clinical record which we have of the tuberculous lesion of the Syrian Lord Roberts, admirably illustrates these points, for "Naaman was wroth, and went away, and said, Behold, I thought he will surely come out to me, and stand, and call on the name of the Lord his God, and strike his hand over the place."

No; if he was to undergo the water-cure, it certainly should not be in a muddy Israelitish stream; he knew of a couple of spas in Damascus which were really high-class! "So he turned and went away in a rage." But being "a great man," he was not obstinate; so he changed his mind, followed out the instruction to the letter, and, to his intense delight, attained the reward which sometimes falls to those who do exactly what their doctors tell them.

Here, so far as this address is concerned, the clinical aspect of the case of Naaman ends; but it still contains an important lesson from a public point of view. For, when the gallant officer found that his cure was complete, he went straight to his good doctor, whilst the tear of gratitude was still in his eye, and begged his acceptance of a substantial and appropriate reward for the great service which he had rendered.

If during the unromantic treatment of spinal caries the weather is very bad, and the patient has to be kept in his bedroom, the window should be open, and, if necessary, and practicable, a fire should be burning—not a poisonous, parching gas fire, however, as one finds in so many bedrooms. The condition of the bedroom of town-dwellers in England is a subject which greatly needs discussion, if not actual legislation. The bedrooms in many London houses have recently become the recipients of a kind of back-wash of that unwholesome tide of æstheticism which was so much in evidence about twenty years ago. The walls are heavily papered and covered with fans, silly brackets and ornaments, dirty-looking hangings and rubbishy photographs. The table or chest of drawers is spread with an unclean cloth, on which are arranged more photographs and dozens of nick-nacks, every one of which is a dust and germ collector. The furniture and window hangings are heavy, and the room is stuffy, dusty, and teeming with germs of all sorts, I should think, and not improbably with those of tuberculosis.

Such rooms should be stripped bare, fumigated and washed; the walls should be distempered, and the floors should be treated to a weekly scrubbing. A small iron bed, a wash-stand and a couple of rush-bottomed chairs would be about all the furniture allowed. This does not sound artistic, I admit, but it is healthy; and it is better to be healthy than "artistic;" but art which is not subservient to intellectual and physical health is false and unwholesome.

When much of my work lay with out-patients I used to have the children with spinal caries placed in the empty boxes in which oranges are imported. Such a box could be bought for a few pence, and an old blanket folded on the bottom of it served as a mattress. In the process of evolution the orange box became for certain children a Phelps's box-splint. By some such means a child with caries can be carried from one room to another or taken into the open air without risk, and by slightly tilting up the box or tray the child can see what is going on around him, and thus he feels that he is not entirely excluded from the bustling world. It is an important element in treatment that the patient should realize that he is still very much in the world—in the bright and sunny world in which his friends are permitted the enjoyment of work and relaxation.

Some years ago a man of about thirty was brought to me with the stiff, straight back, and all the other signs of lumbar caries. He lived close to a cricket-field, and it was early summer; so, having him fitted with a rigid jacket, I told him to spend the whole day lying on his face and watching the games. Thus he was able to enjoy to the full those three essentials for the successful treatment of the disease—rest, fresh air and sunshine, and he made a complete recovery.

But supposing that the child with dorsal caries has been kept lying flat from the very first, the surgeon cannot even then promise that no deformity shall ensue; because the vertebral ulceration heals by granulation-tissue, which is ultimately converted into fibrous and osseous scar-tissue. This, in consolidating, of necessity undergoes a considerable amount of contraction, which may suffice to draw the fronts of the vertebræ together. The more extensive the ulceration the greater is the amount of cicatricial contraction, and the more pronounced the deformity.

Here, in Eastern Canada, it would especially ill become me to speak lightly of the value of cod-liver oil in the treatment of the disease under consideration, but perhaps I may humbly suggest that there are other remedies which may be looked to in the circumstances. As a matter of fact, I am a great believer in the value of the oil, but I would not against his will insist on a child taking a dessertspoonful, or even a teaspoonful of it three times a day—as the manner of some is. So



forced down it is apt to upset the stomach as well as to cause diarrhoea, and it may then be found floating upon the surface of the dejections.

We are all apt to get too much in the habit of prescribing medical and dietetic treatment by routine, ignoring the fact that constitutions are not equally made to pattern. You have heard of that submissive patient for whom Sir Andrew Clark had laid down a very particular and strict regimen which ended up as follows: "And after dinner one cigar, not a strong one; a single Manila cheroot." In answer to the illustrious physician's inquiry, a week later, as to how the dietary had answered, the unhappy patient, whilst replying that he was certainly better, pleaded to be let off the cheroot, which had invariably had the result of dispossessing him of his dinner! Possibly, however, after all, it was that cheroot which had played the most important part in effecting the gentleman's improvement!

Cream, butter, bacon and other fatty foods are all good for tuberculous patients, but I think that there is nothing quite so valuable as cod-liver oil. And if a patient assures me that he *cannot* take it, I often manage successfully to administer it after breaking up a conspiracy amongst his olfactory, optic and pneumogastric nerves. He probably confesses that he likes sardines; so, without becoming aware of the trick, I have the preservative cotton-seed oil emptied away, and keep the sardine box filled with fresh cod-liver oil, of which every day he unconsciously takes a substantial amount.

For a tuberculous infant I order systematic inunction of the limbs and body with cod-liver oil every evening after the warm bath. I fully understand that this is apt to make the child "socially objectionable," but this is overlooked when the mother finds that the child is improving, and steadily increasing in weight. A steady increase in weight is a splendid clinical omen in the treatment of tuberculous or quasi-tuberculous patients.

#### PROPHYLAXIS.

The extermination treatment of tuberculosis is a subject in which every member of the community should be encouraged to take a personal and intelligent interest. It is a great mistake to allow it to be regarded as merely "a doctor's question." And to wage a successful war of extermination the attack should be begun right early. It is a question which is of vital importance for the nursery, the school-room, the dwelling-house, the store, the office, the barrack—in fact, it concerns every department and every period of life. The disease is everywhere, and its eradication is, therefore, a matter of concern to every one.

It has not yet been shown that the offspring of tuberculous parents are born actually tuberculous, but it is beyond question that they are very prone to inherit a peculiar physical condition which renders their

tissues an easy prey to the germs of the disease. The family history of many patients who at the threshold of life become the subjects of enlarged glands, or of chronic affections of the bones or joints, gives incontrovertible evidence of there being a marked hereditary disposition in the matter of tuberculosis.

So comes the question, ought there to be a law preventing those who are undoubtedly tuberculous taking upon themselves the responsibility of parentage? There are some who would answer this affirmatively and without hesitation. But what would the Church in general say to it, and what would the tuberculous curate in particular say to it? He would tell us that he reads in the very beginning of his Book that he is to "Be fruitful and multiply;" and, to do him justice, it must be admitted that in England, at any rate, he does his best to carry out this instruction to the very letter. But let him finish the injunction—Man was to be fruitful that he might *replenish* the earth. Now, though I do not claim to be in possession of peculiar knowledge on this point, I cannot think that the Great Architect of the Universe, who "saw everything that he had made and, behold, it was very good," could have desired that this beautiful world was eventually to be stocked with so large a proportion of tuberculous rubbish.

I am fully conscious of the fact that in suggesting the desirability of preventing the marriage of tuberculous subjects I am advancing a somewhat extreme measure, but surely the subject enters very largely into the question of prophylaxis. It is one, moreover, that will have to be deliberately approached and dealt with some day, and that, perhaps, soon. I do not think that our Houses of Parliament as at present constituted will be anxious to occupy themselves with an attempt to solve this question, vast as its Imperial importance is, but I think that the County Councils which we have lately established through England might find the task not uncongenial. The question is fully as important as that of water-supply, or of protection from fire, or of the isolation of infectious disease, each of which is already in their grasp. Indeed, I think that it falls in under the last heading. And what scope it would afford for discussion!

You will remember that when Horatio and Marcellus joined Hamlet on the platform after the appearance of the ghost, and showed great anxiety to know what had been the subject of his remarks, Hamlet tried to put them off by telling them that his communication had been something of quite a commonplace nature, on which Horatio ejaculated:

"There needs no ghost, my lord; come from the grave  
To tell us this."

I do not know what space the "perturbed spirit" had traversed in

order to deliver his address to the unhappy Prince, but I have travelled about four thousand miles to deliver mine. And if you feel inclined to suggest that there was no need for one to come so far to tell you that which I have just unfolded—that it is commonplace and by no means worthy my long journey or your short one—I shall conclude with Hamlet's retort :

“ Why, right ; you are i' the right ;  
 And so, without more circumstance at all,  
 I hold it fit that we shake hands and part.”

As a matter of fact, I have not, like the ghost, temporarily escaped, for the purpose of this communication, from a place where sulphur, burned in the open, is the ordinary domestic fuel, but I am here in response to a kind and highly flattering invitation from yourselves. I had, indeed, made arrangements for spending my autumn holiday, which certainly did not include two weeks of sea-sickness; but when I received your President's command (for so I regarded your invitation), I at once scattered my personal plans and considerations to the winds and decided to accept it. And let me tell you that coming to Ottawa is not like going amongst strangers, though it is my first visit here; it arouses in me a feeling something like that experienced by a man who is making a homeward journey, for my father was a Canadian. From my infancy I have had pictured to me, and have been encouraged to interest myself in, your forests and rivers, your orchards and wide fields of waving corn, your green pastures and still waters, and your lingering snows (kindly notice that I have put the snows *last*). I have also constantly heard, from my childhood, of the intense loyalty of the people of this great and fertile country, and of the loving devotion of its sons and daughters to that dear Lady who is, indeed, a Mother to us all.

Lastly, let me tell you that your complimentary invitation came to me just after those dark days of trial in which an ambitious, a cunning and an unscrupulous race had been endeavoring for ever to overwhelm us. Dark indeed were those days; but darker still would they have been had we not known that your strong-limbed and keen-eyed sons were standing by us in our time of need ! It is certainly not for a humble individual like me to presume, or to attempt to say what the feelings of undemonstrative England may be towards Canada. I allude to this and to other circumstances only that you may in some measure see with what pride I accepted your invitation, and in order that you may the more fully appreciate the sincerity of the thanks which I herewith tender you for thus directing my course to Ottawa, with an inclination eastwards to Nova Scotia—and Halifax—where, in 1812, my good father was born.

# SOME SUGGESTIONS AS TO THE TREATMENT OF LOCOMOTOR ATAXIA BASED UPON THE EXPERIENCE OF THIRTY YEARS.\*

BY

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The descriptions of the disease by Deschenne and Romberg, which were given to the world nearly fifty years ago, present a graphic and entirely satisfactory picture of this serious affection, to which comparatively little has been added since. The symptomatology and pathology described by these writers are full, and really vary but little from the accepted views of the authorities of to-day, except in the matter of detail. Many clinical features of the disease, which are now advanced as novelties by a new generation of neurologists, were not only found by them but by their immediate successors. The existence of syphilis as an etiological factor, it is true, was not at first directly referred to although it may have been considered one of the results of sexual excesses which they both emphasized so strongly, while they did dwell upon and give deserved prominence to causes which are to-day often omitted from consideration.

It would seem as if the addition to our knowledge of tabes has resulted in later years in the discovery of the arthropathies and trophic disorders, the relation of the abolition of the reflexes, including the Argyll-Robertson symptom, the ocular complications, and the recognition of an hereditary form. Certain refinements have been attempted by those who would divide the disease into the "leg and the eye types," with reference to cases presenting predominant disorders of motion, or, on the other hand, marked ocular symptoms,—a distinction which seems to the writer unwarranted, when we consider the extreme irregularity of the distribution of the lesion in the cord itself or its superior sensory extension, and the likelihood of the foci of degeneration to be found in isolated regions elsewhere. There is a close relationship, at best, between the different forms of cerebro-spinal sclerosis, and a somewhat extended experience has taught me to avoid too close distinctions, and the tendency to pathological and diagnostic hair-splitting.

In such a paper as this, no matter how great the temptation, the writer is naturally prevented from more than briefly considering certain phases of the subject which have come under his notice, and it is my intention,

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\* Read before the Canadian Medical Association; Ottawa, September, 1900.

as well, to consider the treatment of the disease. Much depends upon the duration and severity of the symptoms, there being no doubt that, where the ataxic is seen early enough, there is in some cases much to be done.

All of the textbooks describe tabes as a slowly developing and progressive affection, but the study of a large number of examples convinces me that there are frequent exceptions, and only recently have I been consulted by a patient, who has also seen Dr. Osler. In this man the disease had pursued an unusual course, so far as its acute nature was concerned. Mr. G. L. K., 33, habits good, drank moderately of beer and whiskey; no history whatever of syphilis. About twelve years ago he had swelling of both knees and feet without pain, which disappeared, leaving him with a sense of weakness and a difficulty in locomotion; and from his description this appears to have been of an atactic nature. He, however, regained his ordinary vigour, pursuing his occupation of commercial traveller until 1897.

While in Columbus, Ohio, at this time he noticed a numbness in both limbs which extended from the knees downward, the soles of his feet being, perhaps, the most insensitive. According to his story there was a variation in the extent of the paræsthesia and a sort of intermission, there being a period of normal sensibility, which would last for four or five days and was followed by an absolute loss of feeling. After a week or two of this, his gait became affected, and it was with extreme difficulty that he could walk at all, because of the lack of co-ordination. He recovered also from this attack in a few months and continued apparently in the best of health until eight weeks ago, when he began to have characteristic pains in both legs, which shot up through the feet; there were pains as well on the right side of the head and right arm. There was, for a month or so, some numbness in both plantar surfaces, but this seems to be absent now. There is at times an imperative desire to urinate, but no other bladder symptoms. There is no constipation.

An examination of the eye shows a sluggish condition of the pupils both to direct light and accommodation; both knee jerks were gone. His gait shows a well-marked ataxia, and when he walks he plants his feet far apart, totters and staggers, but can stand with his eyes closed. Most of the motor symptoms are present, so far as the lower extremities are concerned, and his is apparently an exceedingly easy case for diagnosis. The history, however, of the two subsequent attacks and the rapid *début* of the present one impressed me, as I learn it had Dr. Osler.

I first saw him June 25th of this year, and recommended absolute rest, administered ergotine, and frequently burnt his back with the Pacquelin cautery, directing his wife, in the intervals between his visits, to paint

him systematically with vesicating collodion. The result of this treatment is shown by a rapid improvement, his sensory symptoms having absolutely disappeared and his gait being only slightly embarrassed, and at each visit during the last two months there has been a weekly gain. I have no reason to believe that this access, like the last, will not disappear; and I believe it to be due to some acute congestion of the posterior column of the cord, but it is extremely probable that if the same causes are brought to bear, which were a special kind of overwork and attendant physical exhaustion, that there will be ultimately established a continuous and progressive degeneration, with symptoms characteristic and advancing.

I have elsewhere reported cases that have developed within a few days or weeks after injuries, some of which would naturally have nothing to do with a disease such as this. In one of these cases the violence which fractured the leg evidently, in some unknown way, led to the development of tabes. Those who have studied and described railroad injuries have called attention to a neurosis resembling locomotor ataxia, and the writer has repeatedly seen examples of an apparently acute nature where, with anæsthesia, there was an associated ataxia, which in some of the cases was undoubtedly dependent upon the loss of sensibility of the plantar surfaces, and resulting inability to co-ordinate. In these cases there were none of the infallible signs of central degeneration, such, for instance, as optic nerve atrophy, and appropriate treatment usually resulted in a cure. It behooves us to be on our guard in making a diagnosis of locomotor ataxia where the matter of litigation arises, and not to accept sensory disturbances, disorders of locomotion, and even disappearance of the patellar reflex, which may be transitory, as final indication of a really hopeless affection, for I have known them all to exist in curable patients. It is quite possible that many of the cases that have been said to have been aborted by one drug or other were of this nature, and I really think that after all the condition of the optic nerve is the true criterion.

There is no disease of the nervous system that has drawn forth so many therapeutic suggestions, and for which so many persistent attempts have been made to discover a specific remedy, or to devise a line of treatment. The agents recommended include drugs, hydrotherapy, revulsives, and the exhibition of mechanical force, electricity, etc., but, for the most part, little or no good has resulted from any one thing. The experience of many years convinces me that most tabetics are favourable subjects for "expectant attention," and clutch at any straw that may be thrown to them, and say they feel better for a time. Many derive astonishing, if temporary, benefit from some new drug, and the writer, like

others, has sometimes been prompted to be unduly sanguine in advocacy of some new remedy. Many of us have been in the habit of using routine alternatives, and all, I think, have pinned our faith to the possible discovery of syphilis in this case or that. Even with this tangible etiological factor present, I feel that the iodides and mercury have not done very much for established tabes.

In the disease known as pseudo-tabes of Fournier, where there is often a somewhat rapid posterior spinal deposit or acute pathological progress, enormous doses of iodides of sodium or potassium are useful, but in more advanced or slowly developing destruction of the cord, I believe them to be worthless. In this connection a word or two may be said about the generally held belief that syphilis is always the cause of tabes, Erb and others going so far as to hold that 90 per cent. of all ataxics are syphilitic. Of the several hundred cases seen by the writer, it was absolutely impossible to get any *authentic* history of syphilis in more than 50 per cent., and in arriving at this conclusion, the fact was borne in mind that nervous syphilis often results from trivial primary lesion. It must be admitted that some of us are too prone to form our preconceived idea of what the causes should be, and obstinately hold to it, insisting that the patient, despite his denials, has at some time or other been infected, even when we have not a vestige of proof that such has been the case. From a study of a large number of cases that have fallen under my observation, I have, especially of late years, been forced to believe that this disorder, as well as general paresis, which sometimes follows it and to which it is closely related pathologically, develops after protracted and excessive mental and physical exhaustion of various kinds; and such 'exhaustion may be not only due to the use of narcotics, stimulants, or the indulgence in excessive venery in conjunction therewith, as the Germans claim, but to a perfectly innocent, but excessive exercise of power and a consequent enfeeblement. There are ataxics who have had nothing to do with women and in whom the existence of syphilis is out of the question. The patient K. referred to, is a commercial traveller whose several attacks of acute spinal congestion closely followed upon the laborious work in bending over to pack or unpack his sample trunks. I have known it to develop after fatiguing exposure in the field, in overtrained gymnasts, or persons who have been in the saddle for a long time, or, in fact, in subjects who have undergone great and protracted physical strain. Nitrate of silver, in its day, has had its vogue, and even now there are many who use it in all their cases. The writer has long since abandoned it as he has the silver phosphate which promised for a time to be of use. This and other metallic salts are equally unreliable, and the alkaloids,

which affect the circulation of the cord, do little or no good except in acute conditions and for the relief of pain.

Looking back over a number of years, I find that most good has been done where little or no medicine has been given, but where the cases have been managed, first, by insuring *absolute* rest, occasionally, by the suspension treatment, and finally, by the systematic and persistent cauterizing of the back. Special symptoms have been treated by hydrotherapy and the exhibition of remedies to diminish or control pain, or to improve the general nutrition. So prompt have been the benefits of rest that, wherever possible, the patient should be ordered to his bed, or where this is impossible, to be completely inactive. In one Canadian case, who came to me with pronounced ataxia and a train of characteristic and advanced symptoms, an enforced rest in bed for six months, with the attendance of a trained nurse, resulted in the disappearance of all the symptoms with no subsequent return. When we consider that a cause of the disease is exhaustion of some kind, the *rationale* of this treatment becomes apparent.

While everyone who has seen much of tabes must be forced to the conclusion that there is no agent that which can be absolutely relied upon to control pain but opium or its alkaloid, we may under certain circumstances avail ourselves of one of the coal-tar products, either antipyrine or phenacetin, which may be administered in a way recommended by de la Tourette, or the bromate of phenol may be given in ten grain doses every two hours, either for the leg pains or the trunk crises, alone, or with morphine. The French neurologist referred to gives from a gramme and a-half to two grammes of phenacetin in twenty-four hours (in  $\frac{1}{2}$  gramme doses), combining it, in the event of violent pain, with laudanum, ten drops of the latter being given after each dose of the former. In the gastric crises, sulphuric ether, either as Hoffman's Anodyne or in pearl form, or the spirits of chloroform, will often break up a paroxysm of pain.

The use of morphine in a routine way is undoubtedly most pernicious and is very apt to lead to the formation of the habit, so that it is better, if possible, never to let the patient know what he is receiving; and for this reason as well as others, a hypodermic syringe should not be given to him. The case books of the writer contain many instances of morphinomania in connection with tabes, and it may be fairly assumed that some of the cases of post-tabetic insanity are nothing but the results of the morphine habit. A patient recently seen, who had for fifteen years treated his own pains by morphine injection, ultimately became morally debased, and as he increased his doses, developed a characteristic insanity, with delusions of grandeur and confusional excitement. Tabes, on the



other hand, is sometimes, as the writer first pointed out nearly twenty years ago, quite apt to be followed by a general paresis, which is undoubtedly due to the extension of the sclerosis to the cortical layers of the cerebrum; but the diagnosis should be easy.

The therapeutic suggestion of spinal elongation and nerve stretching have led to the more or less general adoption of these mechanical means by a large number of persons, within the past fifteen or twenty years; but nerve stretching has been practically abandoned, except by Chipault and one or two others. Systematic extension of the spinal cord seems to be still a popular, if not an entirely satisfactory form of treatment. Originally exerted by means of suspension in the Sayre-Bryan apparatus, it has been modified by the invention of de la Tourette, or substituted by the unyielding jackets invented by German physicians. The writer, for some time, has used the balance board, by which the head is depressed and the feet held by proper straps, so that the action of the Sayre apparatus is reversed. Besides the avoidance of the danger which has attended the use of the former operation by the patient himself, the extension of the cord seems to be much greater. It would seem, by the statistics collected by Mocyntkovski, Raymond, Blondell and others, that a certain proportion of cases are greatly helped by suspension, the symptoms being ameliorated in at least 50 per cent. of the cases, and in twenty of de la Tourette's forty cases, there was a prompt subsidence of the pains, genito-urinary and ocular troubles, a disappearance of Westphall's symptom, and an immediate gain in the walk.

A short time after the recommendation of this treatment the writer published an analysis of five cases of tabes which were treated by suspension by the Sayre apparatus. Some of these patients received as many as two hundred suspensions, no medicine being given. There were in all an abatement of pain, improvement in the walk, disappearance of Romberg's symptom, and in one or two a permanent benefit, which was undoubtedly due to this treatment and nothing else. For many years I have employed it in those cases where there was no optic nerve atrophy and no symptoms indicating coarse disease, and really believe, though many observers have allowed it to fall into disrepute, that it is worthy of trial in the disease, where there is at best so little to be done.

The actual cautery has, perhaps, proved of the greatest use, not only for the relief of pain in the largest number of cases, but it has revulsive effects of its own, the exact nature of which cannot be determined. Certainly its application over areas of nervous distribution, which are the seat of pain and where a kind of neuritis sometimes exists, is to be recommended. In many apparently intractable cases, the writer has been in the habit of using it once or twice a week over the spinal column, and

so often has a decided and a lasting improvement taken place, that he unhesitatingly recommends it as a routine agent.

A case is recalled of a woman who applied for relief ten years ago, presenting a most striking picture of tabes in the commencement of the third stage. Her walk was absolutely disorderly, and she was practically helpless. During all these years, regular cauterizations have been made by Dr. G. Deforest Smith, with the result that the patient to-day is in good health, and shows no awkwardness of gait. To this patient little or no medicine was given. This is but one of many cases treated in this way with equally encouraging results.

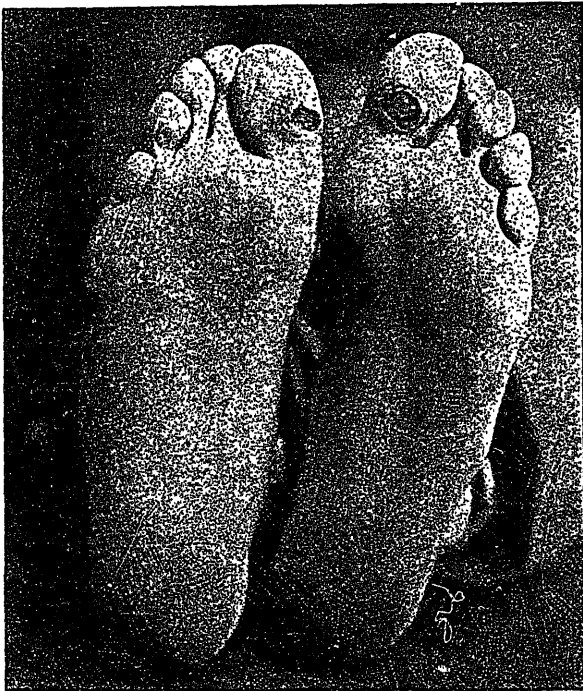
For the arthropathies of the great joints there is little to be done, except to recognize their significance and avoid useless medication. They have, too often, been mistaken for evidences of rheumatism, and even in one reported case, an enlargement of the hip joint of this nature was considered to be an osteosarcoma. The liability to the first mistake in diagnosis is due to the limited beneficial results that attend the use of salicylates, alkalies, and colchicum, and there is no doubt, as has been pointed out, that there is a very close connection between well recognized morbid processes due to uric acid deposit, and certain true affections of the nervous system. The progressive and slow character of the joint enlargement, the absence of any corresponding or sufficient pain, and the subsequent development of other symptoms of locomotor ataxia, should clear up the diagnosis, but we are nevertheless sometimes puzzled when the joints are affected in this peculiar way, as they usually are at a comparatively early stage. As it is not rare for arthropathies to be associated with fulgurating and other pains of suggestive nature, we may give large doses of salicylate of soda, and the writer has found alternate use of hydriodic acid useful. Besides these agents there are others which have been more or less popular but unreliable.

Perforating ulcer, or "mal perforant," which is by Gillies de la Tourette considered a true arthropathy, is a rare feature of locomotor ataxia, and most obstinately resists treatment, for the reason that the tissues which are its seat are with little or no reparative power, being usually hardened and anæsthetic. I have seen three cases of this unusual condition in ataxies, one of them being symmetrical, the other being unilateral.

The peculiar, small, plantar ulcer, which constitutes the lesion, rarely exceeds two or three centimetres in diameter, and usually occupies a site over the metatarso-phalangeal articulation of the great toe, where pressure is commonly made. It may appear over the heel or over the metatarso-phalangeal joint of the little toe, or in fact anywhere, where the shoe pinches near a joint. There is usually a dense, white thickening of

the skin, and so depraved a condition of cutaneous nutrition, that superficial sloughs, blistering, or collections of purulent matter, may occur from time to time, shortly disappearing, while the original lesion continues about the same. Many of these patients find their way to the chiropodist, as they are not disposed to connect this trouble with the spinal disease, which usually up to this time presents few suggestive symptoms.

X., 48 years old, of fairly good habits, contracted syphilis eighteen years ago, which was followed by light secondary symptoms and has since presented late syphilides, which yielded to treatment three years ago. He was married six years after the infection, and has one healthy child.



He has not had tertiary cephalagia, or other cerebral symptoms, and is able to do business as well as ever. About four years ago he had cramps every night in his calves, which lasted for a short time, and two years later, in every change of weather, there appeared the characteristic lightning pains. With each snowstorm, fulgurating pains shot down the back of the thighs and legs, and after an attack of this kind, there were left small circumscribed spots of tenderness in various regions, especially over the insteps and in the toes. Thinking this was gout, he took colchicum,

which gave him relief in about eight hours. About four years ago, numbness began in the right foot and afterwards in the left, so that there was some anæsthesia in both great toes. There have been shooting pains in the testicles and anus. At present there is slight atony of the bladder; so that urination is slow. The bowels are in good order, Romberg's symptom is absent, and the tendon and pupillary reflexes are gone. There is some grey atrophy of the fundus, his walk is slightly ataxic, but this is not noticeable to most people. This gentleman, about three years ago, consulted a chiropodist in regard to what he supposed to be two corns, one on either foot, and the latter proceeded to treat him with nitrate of silver, salves and other agents, which did no good whatever. The two ulcers, which formed over each metatarso-phalangeal articulation, became deeper and broader, and from time to time there was separation of black eschars.

I saw the patient in March, 1900, finding two erosions, which were surrounded by a reddish, insensitive zone, the skin of the under surface of the right being detached and slightly distended by a thin, greenish pus. Both ulcers were about 50 mm. deep and floored with a greyish, insensitive, firm slough. About their periphery was an overhanging ring of dead and toughened tissue, which was pared away, while the centre was stimulated and scraped. Absolute rest, the feet being kept elevated as much as possible, the use of alternative hot and cold applications, and the local application of galvanism, resulted in immediate improvement. In a month the cutaneous surface was healthy and there apparently remained no trace of the ulcers except a slight induration. At the end of this time, disregarding my advice, the patient returned to his work, remaining on his feet most of the day, travelling about the country, and generally abusing himself. There was a relapse, the ulcers reappeared and shortly after a third made its appearance over the metatarso-phalangeal articulation of the little toe of the left foot. In this case, a feature was the existence of two small spots of induration over the metacarpophalangeal articulation of the third finger of each hand. Whether anything will come of these, I am unable to say.

In the reported cases, which are not numerous, some writers have called attention to the communication of the ulcer with the cavity of the joint. In X's case I could not pass the probe any distance, and the injection of a lead salt and the use of the radiograph, failed to show any picture of such invasion. My discouraging experience is, I find, a common one, although I believe if the treatment had been carried out, as is now being finally done in this case, good results may be expected. Certainly, the prospect of amputation should be a warning as well as an incentive to try everything, first, that has the least promise of aid, and as a last

resort, nerve stretching of the plantar nerves of the foot may be tried, as Chipault reports the cure of five cases by this surgical means.

In closing, a word of caution must be given in regard to the empirical treatment, which we are all so apt to adopt, either for the purpose of *doing something*, or of satisfying our invalid. While our earnest endeavours should be to help him if possible, it should be in the direction of an improvement in the general condition, and the treatment of special symptoms, rather than in the use of gold or silver or various remedies, which belong to the armamentarium of the mediæval leech than the progressive physician of to-day. Miserable sufferers whose ataxic tread is already almost on the edge of the grave, like the victims of phthisis, seemingly never give up hope, and to such as these it is almost a cruelty to prescribe useless and harmful drugs.

## NOTES ON ATROPINE.\*

BY

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In the short time allowed for a paper, I venture very briefly to direct your attention to some actions on animals of the drug, atropine, and from these to infer certain of its therapeutic uses.

Belladonna, has been known for centuries. "As in the case of so many other medicinal plants, it was at first only regarded as a poison; it was afterwards much used as a drug, but came into disrepute in the period of reaction against all medicinal remedies. Later, its action in the form of atropine sulphate, was scientifically studied by experiments on men and animals."<sup>1</sup> Thus it was shown by J. F. Gmelin<sup>2</sup> in 1776, that rabbits were somewhat immune to the drug.

Atropine has been termed by Binz<sup>3</sup> "the most powerful of all internal stimulants," and this stimulating action is the one which I should like to emphasize here.

If a dose of  $\frac{1}{150}$  grain of atropine sulphate be administered hypodermically to a small dog, within thirty seconds a marked effect is produced; the pulse increases in rapidity, the blood pressure rises rapidly, and the respiration is somewhat hastened and becomes more vigorous. The animal, unless deeply anaesthetised, tends to struggle. If in an animal thus placed under the influence of atropine, the vagi nerves be cut, no effect is produced on the pulse or blood pressure. If the distal end of one of the cut vagi be stimulated, still no alteration in the blood-pressure tracing occurs. Evidently the vagi are paralysed by the drug, and, in fact, the effects of atropine on the heart closely resemble those produced by section of both vagi.

But besides this, Luchsinger<sup>4</sup> has shown that, in addition to removing the drag of the vagi, the drug directly stimulates the heart. Whether this stimulation be through the augmentor nerves, as believed by Binz, or by a direct action on the cardiac muscle, or, indeed, indirectly by raising the blood pressure and thus calling on the heart to do more work, is not, I think, settled; but the fact if proved is an important one, that atropine not only removes the depressing action of the vagi, but also induces a further increase in the heart's action.

In our experiments on this special point, two in number, the heart's action was not increased in speed by atropine after section of the vagi; in fact was somewhat slowed, but the blood-pressure rose further, which is after all the most important thing.

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\* Read before the Canadian Medical Association, Ottawa, September, 1900.

*Experiment:*—A dog weighing 30 pounds had both vagi divided, being, of course, anæsthetised. Three minutes later the pulse was 99, respiration was 18, and the blood-pressure registered 90 mm. Three one-hundredths of a grain of atropine sulphate was given hypodermically, and seven minutes later, when fully under the influence of the drug—as proved by the negative result obtained from stimulating the distal end of the vagus—the pulse was 88, the respirations 17, and yet the pressure was the same as before. Five minutes later after another similar dose of atropine the pulse was 96, the respirations were 27, and the pressure had risen 10 mm.

This experiment shows that atropine raises the blood-pressure more than by merely paralysing the vagi. This is accomplished partly by stimulating the heart, as already mentioned, and partly by vasomotor excitation.<sup>5</sup>

A curious point came out in our experiments which, as far as I can find, has not been previously noted. If in a dog under atropine one vagus be cut and the distal end be stimulated, no effect is produced on the blood-pressure tracing—this is what we would expect and shows that the terminations of the vagi in the heart are already paralysed. If the *central* end be now stimulated with the same strength of current, then a fall in blood-pressure occurs with slowing of the pulse. (Tracing II.) Evidently there is an inhibition of the heart down through the intact vagus, which one would have expected to be also paralysed. How this occurs it is difficult to explain, and I merely mention it in passing, and may say that it was a constant phenomenon in all the three dogs in which it was tried.

So far, we have seen that atropine stimulates the heart and blood vessels and paralyses the cardiac ends of the vagi nerves, and thus the blood-pressure is markedly raised. It also stimulates the respiration, as shown in the experiment given, when this rose from 17 to 27 per minute and became also more ample.

If, however, a poisonous dose be given then, as so often happens with stimulating drugs, the opposite effects occur—the heart slows, the pressure falls with dilatation of the blood vessels, and the animal dies from circulatory failure. With such large doses we are not now concerned, but rather with the action of the drug in medicinal quantities.

As regards the dosage in man, the British Pharmacopœia fixes it at  $\frac{1}{200}$  to  $\frac{1}{100}$  grain of the atropine sulphate by the mouth, and a little less hypodermically. This is low; and Binz<sup>6</sup> gives the maximum amount to be given three times daily at  $\frac{1}{60}$  grain. Dr. Witherstine, in Sajous' Annual, states that "the usual dose of it internally, is from  $\frac{1}{120}$  to  $\frac{1}{60}$  grain, and the maximum single dose is  $\frac{1}{20}$ ." This last amount

seems very large, unless, indeed, as an antidote to morphia or muscarin, especially as further on Dr. Witherstine graphically describes very unpleasant symptoms as arising from  $\frac{1}{48}$  grain. One-half of a grain has proven fatal,<sup>7</sup> but three grains has been recovered from.<sup>8</sup>

Certain animals of a herbivorous nature, *e.g.*, rabbits and horses, are well nigh immune to atropine. Thus Calmus<sup>9</sup> found that it took 15 grains to kill a rabbit. Carnivora, on the other hand, are very susceptible to the drug. As men's natures vary, some resembling the herbivora and others the carnivora, so we would expect to find a large amount of idiosyncrasy towards atropine, and such appears to be the case. How otherwise can we explain Lepine's<sup>10</sup> statement that "more deaths have followed medicinal doses of atropine than of any other drug?"

It would be a useful rule never to give more than  $\frac{1}{100}$  grain of atropine sulphate at one dose, except in emergencies. When emergencies occur, then we are justified in taking risks.

Enormous doses are given sometimes in morphia poisoning. Bartholow<sup>11</sup> recommends  $\frac{1}{20}$  grain for every grain of morphia taken, and other authorities advise as much as  $\frac{1}{2}$  grain of the sulphate to be repeated if necessary in two hours; in this emergency.

The stimulating action of atropine, when given within safe limits, suggests many possible uses of the drug. Theoretically it seems likely to prove very valuable in cases of syncope, collapse, and sudden cardiac failure, in all of which there is a great fall of blood pressure, and practically it has been so used with success. Thus Lauder Brunton mentions "a case in which a child was collapsed and apparently dying. A subcutaneous injection of atropine revived her for a time. This was followed by relapse; but another injection was administered with good results and the child recovered." It would naturally be contra-indicated in collapse from hæmorrhage, unless the bleeding point could be secured.

Its more prolonged use in threatened cardiac failure has been chiefly tried in pneumonia, and I have frequently thought that benefit accrued from its employment over several days in cases of catarrhal pneumonia in children. Some writers have gone so far as to consider it almost a specific in this affection, but such a belief would probably lead to disappointment.

E. Müller<sup>14</sup> has shown that clinically the effect of atropine in hastening the heart's action decreases with advancing age and is more or less wanting in those cases where the heart has, from valvular disease or other causes, had extra strain thrown upon it for some time. Hence the drug would be of little or no use in breaking down of compensation of the heart.



As a means of averting danger in the induction of or during anæsthesia from chloroform, atropine has long been recommended, and many anæsthetists regularly give an injection of it alone, or with morphia, before commencing. Kunkel condemns this as causing delay in the awakening of the patient after the anæsthesia, but this seems to be a trifling drawback, if in any way it increases the safety of the administration. The Glasgow Chloroform Commission found that atropine was of benefit in chloroform anæsthesia, but, on the other hand, the Hyderabad Commission came to the opposite conclusion, and in a discussion which ensued between members of the two factions, Surgeon-Major Laurie<sup>12</sup> wrote, "If the Glasgow Commission regard the effects of atropine as beneficial, they must intend to convey that the inhibitory action of the vagus is a danger in chloroform administration, when atropine is not used, *i.e.*, that the normal action of a healthy nerve is dangerous to life." This argument is fraught with fallacies. In the first place, it assumes that the *only* way that atropine can affect the organism is by paralysing the vagus. This we have seen to be wrong. Again, it does not at all follow that, because the normal constant gentle inhibiting action of the vagus is harmless, therefore the abnormal stimulation of that nerve by an irritating body like chloroform may not be dangerous. In fact, it is generally admitted that some cases of sudden death, apart from anæsthesia, are due to too violent action of the vagus. Whatever the theory be, we found that ten dogs who were under the influence of atropine (in three cases combined with morphia), were very decidedly more difficult to kill with chloroform than animals not so treated. In my opinion, a small dose of atropine, say  $\frac{1}{150}$  grain of the sulphate, hypodermically administered before the induction of anæsthesia from chloroform is a decided safeguard.

Lastly, atropine may be used as an emergency remedy when danger *has* occurred during chloroform administration. I have never had occasion to use it thus in practice, but in animals the effect is marked. For example, a fox terrier was given chloroform on a towel. He struggled and then rather suddenly the respiration became shallow and ceased. Artificial respiration was used without success; the tongue was forcibly drawn out and seen to be deeply cyanosed, and the heart could not be heard on auscultation. One-fiftieth of a grain of atropine sulphate was given hypodermically and the swelling rubbed until it disappeared, and the artificial respiration was kept up. About a minute later the heart was felt to be beating rapidly. Artificial respiration was discontinued, and soon natural breathing commenced in a rapid shallow manner and the animal recovered. Exactly the same thing occurred in another dog. Both animals seemed dead when the drug was given, and

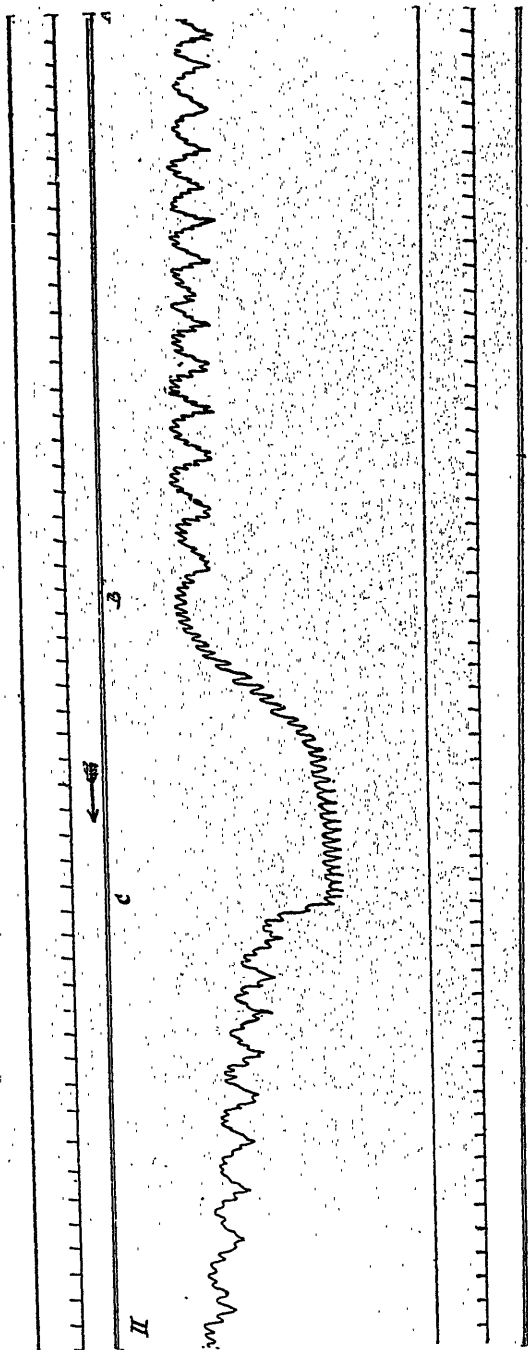
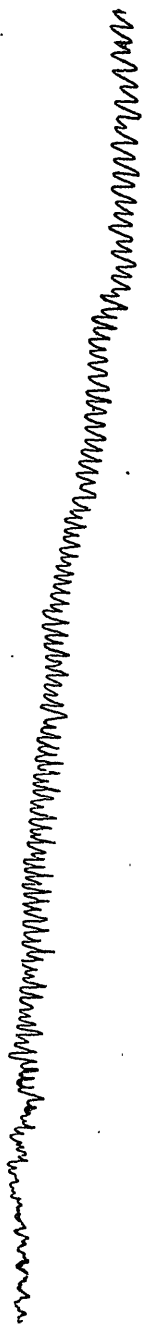
probably would have really died had it been withheld. Here however, the danger of the *post hoc ergo propter hoc* fallacy must be borne in mind. Tracing I. shows recovery from chloroform poisoning apparently hastened by atropine.

It is only fair to add that Professor Wood<sup>13</sup> stated in an address delivered before the International Medical Congress at Berlin, in 1890, that in experimenting with various drugs on dogs poisoned with chloroform, "the results with atropine were almost negative. Ten cc. of a 2 per cent. solution of atropine sulphate altered the pulse rate, but had no apparent effect upon the pressure or respiration, and in no wise prevented final cardiac arrest." Ten cc. of a 2 per cent. solution, however, is such an enormous dose (equalling as it does about 3 grains of atropine) that he might well have got negative results, when a less amount would have produced the opposite effect.

In conclusion, I would urge the more general use of atropine in those cases of failure of the circulation, from whatever cause, where "the most powerful of all stimulants" is indicated.

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7. "Sajous' Annual," Vol. I., p. 524.
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11. Murrell's "Poisons," p. 156.
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14. *Über die Wirkung des Atropin auf das gesunde und kranke menschliche Herz.*



#### TRACINGS FROM CAROTID ARTERY.

TRACING I. Dog recovering from chloroform poisoning. Recovery hastened by atropine given at A.

TRACING II. Dog under atropine. Left vagus divided. Distal end stimulated at A with negative effect. Central end then stimulated at B. Pressure fell, pulse slowed and respiratory curve disappeared. Stimulus removed at C.

# SOME EXPERIENCES IN THE METHODS OF TREATING HERNIA BY OPERATION.\*

BY

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It is now nearly twenty years since surgeons began to operate for the cure of hernia by the open method. Previously radical cures had been attempted in various ways, such as Wützer's and Wood's method by subcutaneous closure of the ring, and Spanton's method by invaginating the tissues into the ring after reduction of the hernia, and fixing them there. Both these methods required great skill and the results were not always the most favorable—in fact they never became popular, and outside the practice of the originators, were rarely employed. Other methods, by injection into the ring of certain substances such as solution of oak bark, etc., in the hope of causing sufficient inflammatory action to close the rings, had a certain reputation in the hands of a few men. In small herniæ the method was fairly successful. Most of these proceedings were secret and practiced by members of the profession who were not very far removed from charlatans.

With the introduction of antiseptics the subcutaneous method of treating surgical affections gradually became obsolete and the open method gained more and more favor every year. This change was slow, for old ideas die hard, but the "principle of getting in and finding out" gained ground steadily—Marcy of Boston, Banks of Liverpool, and Volkmann of Halle, began to operate by the open method in the early eighties. First, an incision was made over the tumour, next the sac was excised, with or without bringing together the pillars of the ring. Soon after, more complicated methods were introduced, and finally, no one considered himself a surgeon unless he had invented a new operation, or a modification of an old one, for the radical cure of hernia. Everybody now rushed into operative measures for the cure of hernia and surgeons vied with each other as to the number of cases operated on and cures effected. Statistics of hundreds of cases were published and with few failures. Soon, however, there was somewhat of a reaction, it was found that after a time the so-called cures were not cures at all and relapses were frequently reported by rival operators.

Surgeons now turned their attention to improving methods of technique. It was found that sutures, months after being introduced, fre-

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\* Read before the Canadian Medical Association, Ottawa, September, 1900.

quently came away; that sinuses often remained at the site of the drainage tube and that infection frequently got in by this channel. I remember one huge inguinal hernia I operated on about this time, had a sinus for over a year, which did not close until all the silk sutures came away. This case was a remarkable one and I think was published—the hernia was so large that the man could not put on his trousers. In operating I had the greatest difficulty in replacing the intestines in a cavity to which they had been strangers for years and it was only by the inversion of the patient this could be accomplished, after their return the abdomen was as tense as a drum. In this case the testicle of the affected side was removed and the conjoined tendon sutured to Poupert's ligament. Although a sinus persisted for so long, the man had a perfect cure and has worked hard at his trade (that of a blacksmith) ever since.

The methods of operation, as I said before, are almost as numerous as surgeons, certain general principles however underlie all operations—first, the necessity for excision or obliteration of the sac—second, closure of the canal—and third, union by first intention. Some also hold that an alteration in the direction of the canal is necessary.

On this side of the Atlantic Bassini's operation, or some modification of it, is the favorite. In children almost any operation will do, and a failure to cure is rarely seen. I have operated in many ways—first, isolating the sac, excising it, suturing the ring after the Banks-Czerny method. I have also tried Kocher's method of transplanting the sac, Ball's method of twisting it, Macewen's method of tucking it up, and many others.

For some years I have performed the radical cure of hernia by Bassini's method and have not regretted it. However, everything has not always been satisfactory, and although, to read about the operations now performed, one would imagine no complications ever occurred, still, in visiting the various hospitals in the States or abroad, these wonderful results are not always seen. It is not uncommon to see a little pus, some high temperature, or a sinus.\* I might now mention some of the mishaps which have occurred to me in some of my cases of hernia treated by operation :

I have found that by cutting the muscular part of the internal oblique and transversalis (that is the outer arched border), hæmorrhage frequently occurred during the vomiting from the anæsthetic and a little hematoma formed there which occasionally suppurated and sometimes a slough followed. Again, at the site of the drainage tube a sinus

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\* The frequent occurrence of sinuses after operation induced McBurney to advocate an operation by open incision which he afterwards abandoned.

persisted and lasted till some sutures came away. Again, although the wound healed by first intention, after months a little abscess would appear, break, and leave a sinus through which would exude a suture. All these little accidents were annoying, and in speaking to various surgeons I find it has been their experience also. I endeavored to avoid such untoward results by improved technique.

I have used all kinds of sutures; silk, silkworm gut, kangaroo tendon and aseptic and antiseptic catgut, etc., and have come to the conclusion that absorbable ones are the best and if the absorbable suture is an antiseptic one, it is to be preferred. The belief that a silk or wire suture is better when there is much tension and that it is necessary to keep the parts together indefinitely, is almost universal, yet, I dare venture to say that no ligature will hold parts together more than three or four weeks if there is tension. In such cases the sutures invariably cut themselves out and lie loose in the tissues if composed of unabsorbable material—hence a suture that will last about three weeks is all that is wanted.

For some two years now I have used nothing but strong chromicized antiseptic gut. Antiseptic catgut is preferable because we can never altogether be sure of perfect asepsis and a moderate amount of sepsis will be overcome by an antiseptic ligature where a simply aseptic one would break down.

I never wash out the wound, for water in the loose cellular tissue distends it and makes it less resisting to germs. It is better also to dissect out the sac with a knife than to tear it out with the fingers. I also now never cut the internal oblique and transversalis in transplanting the cord, but merely pull the edges aside. The ring is closed by uniting the conjoined tendon and edge of the rectus muscle with Poupart's ligament by two or three interrupted chromicized catgut sutures.

It is very important that the sutures should not be too tight or too close together, a neglect of these precautions may lead to sloughing due to the cutting off of the blood supply. The external oblique is united over the cord by a continuous catgut suture and the skin wound is either brought together by a continuous subcutaneous or interrupted suture of horsehair. I never now use a drain and rarely apply any other dressing than iodoform paint and collodion.

I should have mentioned before that I now make the incision in the skin well above Poupart's ligament so that after suturing the conjoined tendon to Poupart's ligament, I still have a sufficient amount of external abdominal oblique muscle left to suture to its upper portion. I also make the incision farther away from the pubes than formerly as these parts, not being covered with hair, are more easily sterilized and there is less fat there.

In all my cases I insist on rest in bed for three weeks after the operation and more if the patient can afford it. During the past summer I have had two cases of cecal hernia with the appendix in the sac—in both cases the appendix was removed and in both cases there had been a history of previous attacks of appendicitis, evidence of disease of the appendix was present in each case.

For the last two years I have used rubber gloves in all operations on the abdomen and others where strict asepsis was essential, and I have been well satisfied. I think my results have been better in all operations since I have used them, I have had fewer stitch abscesses and altogether have operated with greater confidence.

During the last two years also I have not had a case of suppuration nor has a sinus resulted from the operation for radical cure. Among the cases operated on are included several severe umbilical herniæ. I do not mean to say that there will not be recurrence in some of the cases, but I do say the chance of relapse is much less when the wound heals by first intention.

The end results I have not given, nor have I tabulated my cases in this paper. I only want to give you the result of my experience of the methods of operating and the various sutures used in closing the ring. The cases that I have traced are as well to-day as possible and I have not now the disagreeable duty of treating a sinus for months which won't heal until the sinuses are discharged.

The mortality from the operation is practically nil in non-strangulated cases. Formerly, when all kinds of cases were operated on, deaths occurred in about five per cent. in the hands of able surgeons. At first, operations in children were not advised, except when strangulated, now these are our most successful cases.

## EMPHYEMA.\*

### A STUDY OF THIRTY CASES FROM CLINICAL AND BACTERIOLOGICAL STANDPOINTS.

BY

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Concerning the mode of onset of the illness in these cases, but little is noted that may be regarded as extraordinary. In those that have been classified under the metapneumonic group, an onset, best described as "pneumonic," prevailed; in some, a crisis occurred, in others none is recorded. (It should be noted at this point that not a few of these patients were not brought to the hospital until many days after the period of crisis, if such there were, had passed, and thus this part of the history is lacking).

A gradual onset was noted in four cases, three of which were those of tuberculous patients. Pleurisy, with a clear sero-fibrinous effusion, was demonstrated in another case. Severe, recurrent chills with peri-urethral abscess, marked the onset of a protracted case. Two are supposed to have followed typhoid fever, yet there is but scant support forthcoming for this supposition. The abdomen was the seat of pain so far as the complaints of four children indicated. An onset with a convulsion is not recorded.

In a general hospital, where patients with the infectious diseases were not received, one would scarcely expect to find that more than 45 per cent. of any one class of cases under treatment, were among children; especially would this be rather a surprise where the proportion of beds for children is to those for adults as 1 to 8; yet this is about the proportion we find in our hospital experience. Of the thirty patients herein reported, thirteen were under twelve years of age. The youngest of the series was eight and one-half months, the eldest sixty-six years.

Under 1 year . . . . .	1
From 1 to 5 years . . . . .	3
"    5 to 12 years . . . . .	10
"    12 to 20 years . . . . .	2
"    20 to 30 years . . . . .	7
Over 30 . . . . .	7

There were sixteen males and fourteen females.

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\* Read before the Canadian Medical Association, Ottawa, September, 1900.



The right side was involved in eleven cases ; the left side in eighteen, while a double empyema was observed but once. Although no reference is made to this subject in text-books, as Dr. Francis Huber said over ten years ago, he collected from the literature about one dozen cases, and several more have been recorded since. Many of such cases have been cured, yet the one in this series terminated fatally.

Two of our patients showed scars of a former operation for empyema over the side again acutely involved. A brief report of these cases may be of interest :—

A. O. (2577), m., æt. 10 years, became suddenly ill on Jan., 25th, with sharp pain in the left side, chill, flushes, cough and dyspnoea ; fever 100° to 102°, puls 100 to 104, respirations 36 to 40. Within a few days there were signs of fluid in his chest and the exploring needle confirmed these signs. His mother gave a history of his having pneumonia at the age of seven, and that during this illness his side was opened for pus, and the scar upon the left side confirmed that statement.

He was again operated upon along the line of the old incision, and considerable pus was evacuated but no fibrinous masses.

The recovery of this case was long and tedious, a sinus presenting after 118 days in the hospital. The second report of empyema concerns:

E. B., m. æt. 9 years, who fell ill on Sept. 20th, 1896, with chill, severe pain in right side, shortness of breath and headache, but signs of pneumonia did not develop for some ten days. After this the pain in the right axilla became more severe, a friction rub was heard, while blowing breathing and rusty sputa were the chief signs of pneumonia. In a few days the blowing breathing had disappeared and the patient's condition was constantly becoming worse. The right side, always flatter than the left, since his former operation at the age of three years, now began to show a small area of bulging over the lower ribs anteriorly, and later, œdema developed just about the scar from the former surgical wound.

He was operated upon in the usual way and made a good recovery.

Well recognised among clinicians and often referred to in books, is that form of empyema in which the cavity, once evacuated, may refill, yet this form of recurrent empyema, so far as the writer knows, is very rarely described.

Two cases in tuberculous patients, began with pneumothorax. Gas in variable quantity was noted at time of aspiration or resection in three other cases which lack the usual history of the onset of pneumothorax, as well as any further evidence of its presence.

Streptococci and staphylococci were found alone in cultures from the effusions of these cases, in two of which the odour of the pus is reported as offensive. There is no evidence to show that a communication with a bronchus existed.

<i>The Season:</i> —Winter . . . . .	11	Summer . . . . .	9
Spring . . . . .	7	September . . . . .	3

*The Diagnosis:*—While the history and physical signs pointed in

most instances to the presence of pus in the pleura, an exploratory aspiration was made in twenty-five cases. In one of the patients empyema was indicated by oedema and redness about a prominent area at one part of a dull half of the thorax. Four patients were admitted for conditions as follows :

1. (774) Discharging sinus having been operated on some months before.
2. (1150) Discharging sinus along the track of the aspirating needle used some weeks before.
3. (1526) Persistent sinus from operation two years previously.
4. (4348) Persistent sinus following aspiration six months before.

It is the teaching of all clinicians that when there is the least doubt about the quality of fluid in the chest, or even about the presence of fluid that one should aspirate. But little, if any, harm can come of this operation, and the diagnosis is made thereby very sure. Empyema cannot be diagnosed in season without resort to this means.

*The Prognosis.*—The experience derived from these cases would lead one to say that very much depends upon the *nature of the infection*. This we think should be first as we believe it is, of the greatest importance. In the second place, *the readiness or otherwise with which the compressed or retracted lung returns to fill the cavity, marks the difference between a case of favorable and rapid progress to complete healing, and a protracted one, ending possibly in extensive rib resection with deformity.*

The prognosis of purulent effusion in a tuberculous patient, usually a mixed infection, whether with or without pneumothorax, is very bad; it has been in these cases but a question of time, the discharge never ceasing. A pneumococcic infection, while comparatively benign, must be regarded in the light of the variability or the virulence of the micro-organism. Osw. Vierordt has recently reported four cases of pneumococcic empyema which had a fatal termination, in two of which peritonitis due to the same organism was present.

While the first condition of prognosis relates to the patient's life, the second condition has to do more with health of the subject and the length of time of his return thereto. Of those patients who lived and were under observation until healing was complete, that patient of whom it is recorded that "the lung expanded with a fit of coughing just as the tube was being inserted" at the time of operation, made the shortest recovery. She went out of the hospital in twenty days from date of operation, healed. Where the lung was found far from the wall of the thorax and adherent, recovery was slow, forty, fifty, sixty, seventy, and

in one case one hundred and twenty days, were spent before healing was satisfactory.

TABLE SHOWING DURATION OF ILLNESS IN RELATION TO OPERATION.

(Not including those dead or who went out before recovery.)

Hist. No.	No. of days before operation.	Date operation.	No. days after Operation.
802	20	Aug. 10th, 1895.	20
1162	48	Jan. 18th, 1896.	22
1556	46	July 30th, 1896.	72
1557	28		52
1691	20	Oct. 25th, 1896.	47 Recurrent empyema.
2081	21	May 27th, 1897.	120 Pregnant, large pleur. cav., healed.
2156	14-16	June, 1897.	225 Sinus slow in closing.
2265	20	Aug. 30th, 1897.	20
2577	10	Feb., 1898.	118 Recurrent empyema.
3475	20	April 13th, 1895.	21 Went home with tube still in.
3575	26	May 25th, 1899.	40
3602	37	June 8th, 1899.	34
3707	28	July 17th, 1899.	30
4158	15	Jan. 2nd, 1900.	70 Small sinus soon closed.
4339	22	Feb. 19th, 1900.	71 Small sinus.
4348	539	Feb. 26th, 1900.	77 Empyema necessitating extensive [resection]
4412	37	Mar. 20th, 1900.	74
4661	20	June 15th, 1900.	48

*The Treatment:*—There is no case of empyema recorded in this series in which cure followed a simple aspiration. It is interesting to note, however, that in one patient (1150) the pleura was aspirated, more for a diagnosis than otherwise, after the patient had been ill for about three months. The wound made by the exploring needle did not close. Pus continued to discharge through this track for about five weeks in such quantities that the dressing needed to be changed from four to five times daily. Shortly after the cessation of this flow the cough became worse and pus was expectorated in large (cupful) quantities. When admitted to the hospital the dull area on the right side was explored under ether, with small and large needles, in the eighth and tenth spaces, without finding pus. She made an uneventful recovery.

In another patient (3475) in whose history, personal and family, there appears no evidence of tuberculosis, and in whose pleural fluid pneumococci and also streptococci were found, the aspiration method had a fair trial. He was aspirated on March 26th, April 6th and 11th, and on April 13th he was operated on, a portion of the 9th rib being resected; at time of operation, the lung could not be felt. He made a rather protracted recovery.

Having but little faith in the curative effect of but simple aspiration, the pleural effusion in these cases, not admitted for closure of sinuses, etc., was evacuated by rib resection and opening the sac.

In fourteen cases a portion of the 8th rib was excised, usually at the

lower scapular angle or a little anterior thereto; in eight cases the 9th rib; in one the 7th and 8th; in one the 8th and 9th; and in one the 9th and 10th. In two cases no rib was excised, as in one of these the pus pointed and was evacuated by incision only when the patient was *in extremis*; the other is (1150) already described. A rubber drainage tube was used with but two exceptions, when a silver tube was inserted. Washing out of the cavity was adopted a few times in one case only. It was a tuberculous case, originating as a pneumothorax, in which the odor was very offensive. No untoward effects followed this process.

A solution of cocaine was used in one case of rib resection; all other cases were operated on under general anæsthesia, induced by ether or chloroform.

*Fatal Cases:*—Four patients died in the hospital and a fifth died a few months after going home.\* The percentage of deaths, then, in these cases, so far, may be put down as 16. Of these five, *two* were tuberculous, the sinus resulting from the operation never healed. The patients were the subjects of well marked phthisis. *One* was the victim of a double empyema due it would seem to a streptococcus infection, and *one*, an old patient aged 66 years, succumbed shortly after an incision was made into the pleural sac which contained foul smelling gas and pus. Then case of F. N., No. 3571, where appendicitis and peritonitis complicated the empyemic condition, completes the number.

Considering the gravity of those cases we think the results may be put down as very good indeed. Where a simple infection with the pneumococcus was found, no deaths are recorded.

1. (3632). C. A., æt. 66, m., was taken ill May 1st, 1899, with pain in lower part of right thorax. He remained at work till May 24th, when he took to bed. Dulness, diminished breathing and swelling from 7th rib downward on right side, were the chief signs made out; heart dulness could not be distinguished. June 15th, incision made over swelling near right costal margin, foul smelling gas escaped and limits of the cavity were not ascertained. A rubber drain was inserted when pus flowed on coughing only.

On 17th, 18th and 20th, attempts were made to localize the pus, punctures being made in 8th and 9th spaces but without result. Patient died 20th June, 1.45 p.m. (No note of bacteriological examination; post-mortem and cultures, not made.)

The clinical history in this case is obscure, the finding suggests rather a latent localised pyopneumothorax.

2. (3571). F. N., æt. 37. (See chief facts in this case under Bacteriology.)

3. (1855). A. L., æt. 29. In August, 1896, patient suffered from right sided pleurisy, and on Jan. 16th, 1897, complained of pain in left side, cough, shortness of

\* Another patient died a few days after leaving the hospital. His was a tuberculous case.

breath, fever and sweating. Feb. 9th his right pleura was aspirated and one and a half quarts of pus were withdrawn. Feb. 6th, over a slightly bulging area and without anaesthesia, the 9th intercostal space was incised and a metal tube inserted; Feb. 15th tube removed and  $1\frac{1}{2}$  inches of 9th rib excised in posterior axillary line to secure better drainage.

Patient succumbed June 4th. Cultures gave streptococci in pure growth. Post-mortem—Ulcerative Pulmonary Tuberculosis; Tubercular Ulceration of Epiglottis and Intestines; Adhesive Pleuritis of right side; Interstitial Myocarditis.

4. (4454). L. M., æt. 12, was taken ill about Jan. 25th, 1900. with what was regarded as pneumonia of left side. She was ill for four weeks, then she improved for a while. On March 24th it was found that there was tenderness and fulness below the left nipple, her general condition having recently failed.

April 4th, pus was demonstrated by aspirating needle; two days later resection of 8th rib below angle of scapula, gave exit to a large quantity of yellow pus. Some days later, however, the discharge lessened, and on this account it was decided to resect a portion of the 10th rib, thus opening the cavity at its lowest level, April 12th, and a tube was inserted. The patient's condition continued extremely bad; fever, restlessness and dyspnoea characterising it. She succumbed on April 19th to a double empyema. Bacteria, streptococci.

Post-mortem—Bilateral empyema, numerous pockets of pus; collapse of both lungs. Bronchitis. Some pulmonary interstitial changes.

When we review the tables showing the length of time required to complete the cure of these patients, one naturally asks, whether any better method than those adopted can be devised by which the retracted and adherent lung may be released and allowed to fill the pleural sac. We think *yet earlier* recognition of an empyema is the first step, then a prompt evacuation of the pus seems indicated. Theoretically, the use of the valvular drainage tube that keeps the pleura a closed sac, so far as atmospheric pressure is concerned, appears to one as a means of helping toward greater lung expansion. Nicholas Senn suggests aspirating the chest as a means of securing pulmonary expansion, a day or two before the operation which admits air. Can not something be done in these cases where adhesions are firm and the lung retracted? Perhaps Delorme's operation or some other new operation for breaking down the pleural adhesions and stripping the lung of its contracting fibrous covering, may give more satisfactory results.

*The Bacteriology*.—Jakowski states that every form of pleural inflammation is of bacterial origin, although one does not always succeed in demonstrating the bacteria in the exudate. Negative results in the examination of pleural effusions are frequent, and especially so in those of the serous or sero-fibrinous form. A. Fraenkel says, in summing up his article on the bacteriological examination of purulent pleural effusion, that when in such an exudate, the microbial examination of a large number of preparations is negative as well as the cultures, one may conclude that the condition in the highest probability is of tuberculous origin.

In our series of thirty cases, examinations of the pleural effusion were made in twenty-three with the following results:—

Micro-organisms.	Frequency.	Pure.	Mixed.
Streptococcus .. . . . . .	7	4	{ 3 : i. Staphylococci. ii. Pneumococci. iii. Tubercle Bac.
Diplococcus Pneumoniae.	6	4	{ 2 : i. Streptococci. ii. B. Coli Com. et Staphylococci.
Staphylococcus .. . . . . .	6	4	2. Streptococci : Diplococci Pneum.
Bacillus Ramosus .. . . . . .	1	1	0
Bacillus Pyocyaneus .. . . . . .	1	1	0
Tubercle Bacillus .. . . . . .	1	0	1. Streptococci.
Bacillus Subtilis .. . . . . .	1	1	0
Sterile .. . . . . .	4	0	

The two main features as shown by this table, which may be emphasized, are the comparative frequency of staphylococci and the rarity of the diplococcus pneumoniae.

From the clinical history, one is clearly justified in including thirteen of these cases under the class of metapneumonic empyema, although the bacteriological findings do not correspond in every respect. The pleural effusion was examined in eleven instances and in but four was the diplococcus lanceolatus found alone, once it was found with staphylococci and the colon bacillus. In two cases streptococci were present; staphylococci were found in three cases, once alone and twice associated with the colon bacillus; two cultures proved sterile.

The following table presents at a glance the metapneumonic cases with those also in which the pneumococcus lanceolatus was found and where a history of pneumonia was not clear:—

Case Report No.	Age.	Month.	Cultures.	Results.
1526	9	Admitt	ed for persistent sinus	2 years.
1691	9	Sept.	No cultures.	Cured.
1162	5	Dec.	Diplo. Lanceo.	Cured.
2084	20	May	Sterile.	Cured.
2090	8	April	Staphylococci.	Cured.
2295	2	Aug.	Staphylococci et B. Coli.	Cured.
2720	46	Jan.	Diplo. Lanceo.	Cured.
3707	8	July	Sterile.	Cured.
4339	6	Feby.	Strepto. Pyo.	Cured; Small sinus.
4412	3	Jan.	Diplo. Lanceo.	Cured.
4454	12	Jan.	Streptococci.	Death; double empyema.
4661	23	May	Diplo. Lanceo.	Cured.
3571	37	May	{ Diplo. Lanceo. B. Coli Com. Staphy. Aur. and Alb.	Death.
3475	22	March	Diplo. Lanceo. Streptococci.	Discharged; tube in.

It will be seen from the table that but six cases gave evidence of the presence of the diplococcus lanceolatus, and thirteen are of the metapneumonic type; clinically, we thus have a positive bacteriological re-

sult in only 45 per cent., supporting the view that the diplococcus pneumoniae was active in producing the empyema.

This view is now well established; the percentage in our cases however falling rather below that of other observers. It may be that as some would account for the sterile cases by the suggestion of the death of the organism of whatever form, so the same suggestion might have equal, if not more, force as applied to the diplococcus lanceolatus.

All cases of pneumococcus infection terminated favorably, with one exception. In this connection it may be well to review the chief points in the history of this case:—

F. N., æt. 27, was taken ill about the 1st of April, 1899, with general pains, thoracic and abdominal, associated with some diarrhoea. A few days later he had cough, blood tinged expectoration and definitely left sided thoracic (axillary) pain, aggravated by cough; he had also some sweating at night.

On April 19th, over two weeks after the onset, he experienced a sharp pain in the right iliac region followed by tenderness and vomiting. The history thereafter until his admission is not recorded.

When admitted on May 22nd, the left chest was aspirated and pus containing the diplococcus lanceolatus was withdrawn; the chest presented a bulging on the left of the 3rd, 4th, 5th and 7th intercostal spaces, with a faint trace of œdema at one part.

Under ether, the patient underwent a double operation for empyema and peritonitis. The appendix was gangrenous at the tip; there was an omental abscess and a considerable amount of pus in the lower part of the abdomen. The pus from the pleural cavity is described as thick with numerous fibrinous masses. The walls of the pleural sac could not be reached by the exploring finger. The pus from the peritoneum contained the bacterium coli; that from the chest at time of operation is reported containing staphylococci.

The history of this case suggests a general infection manifest in general pains, diarrhoea, etc., and a primary localisation at least of that infection in the lungs, with bronchitis, pneumonia of what form we cannot say, and pleurisy of purulent type due to the diplococcus pneumoniae. Upon this followed signs of peritonitis.

Concerning the results found in the bacteriological examinations made in these cases, it may be said that some doubt must remain as to the exact relationship which the bacteria bear to the production of pus. This applies especially to the forms of, staphylococci, the bacillus coli com. and the bacillus pyocyaneus, ramosus and subtilis.

We have in this series but three cases occurring in tuberculous patients, *i.e.*, patients in whom tuberculosis is undoubted. In one of these the cultures showed pure streptococcus growth, no tubercle bacilli were found in the pleural effusion. The others were the subjects of pneumothorax with shrunken and intimately adherent lung.

The examinations for tubercle bacilli were positive in one case on two occasions by two observers, while in the other there is no record of a test having been made. While it is rare to find tubercle bacilli in cases

of empyemata in tuberculous subjects, yet where a pneumothorax exists one can readily understand how much more likely one would be to secure a positive result in examinations for that organism. We may note in passing, too, that among these cases there is one which shows how an empyema in tuberculosis may originate in a pure streptococcus infection.

In the four cases of purulent pleurisy, staphylococci were found alone. In one of these one need not wish for a more typical history of lobar pneumonia than is to be found in this case. There was crisis on the 9th day and after two or three days the temperature rose, and for five weeks ran a septic course. It is recorded that in the act of exploring, air escaped; yet at the time of resection of the rib some days later no evidence of pneumothorax was detected.

The rôle played by this micro-organism in the cause of empyema is yet very uncertain. Fowler considers it as still doubtful whether it should be regarded as a causative agent, and Netter remarks upon the rarity of its being found alone. That it may render purulent a serous or sero-fibrinous fluid is admitted, and the recent cases recorded by Lop and Monteux confirm this teaching.

Many regard an infection with staphylococci as far more common in tuberculous patients. Yet in reviewing the histories of these patients so infected, but little if any evidence is forthcoming to show that these were tuberculous subjects.

The bacillus ramosus and the bacillus pyocyaneus were found in one case where some weeks before about eighty ounces of clear fluid had been withdrawn. In this case a sinus persisted and fluid discharged along the track of the exploratory needle.

The bacillus subtilis was found in one case. The patient's chest had been aspirated under very unfavourable circumstances to relieve the urgent dyspnoea some days before the rib was excised.

To Dr. James Bell and Dr. Garrow, under whose care these cases finally came, I am greatly indebted for the privilege of making this study, and also to the members of the Resident Medical Staff who have so kindly assisted in making the analysis of the reports.



# QUARTERLY REPORT OF THE EYE AND EAR CLINIC OF THE ROYAL VICTORIA HOSPITAL, MONTREAL.

BY

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## **A Case of Primary Carcinoma of the Lachrymal Gland—Ex- tirpation of the Growth by Kronlein's Operation.**

James W., æt. 31, English-speaking native of Canada, came to the out-patient department of the hospital complaining of a bulging of the left eye.

For the past year the patient had felt indefinite "stitches" in the outer and upper part of the orbit, and during a period of ten weeks prior to his coming to the clinic he noticed a gradually increasing prominence of the left eye accompanied by failure of vision of that side. During the last mentioned period the patient said that the parts to the outer and upper side of the eye had become slightly tender to the touch, but he had never experienced any definite pain in connection with the growth. He had been living a generally intemperate life for some years past, and on two occasions during drinking bouts had received blows upon the left eye. There was specific history.

The patient was a fairly well nourished man of medium height, exhibiting a considerable degree of anæmia as shown by pallor of the face as well as lips and conjunctivæ. The right eye was normal in every respect, R.V. =  $\frac{6}{16} + 0.5 \frac{6}{16}$ .

The changes in the left eye, as will be seen in the photograph, were very marked. There was increased fulness of both the upper and lower lids with obliteration of the palpebral folds. The left upper lid was on a lower level than the right but the palpebral fissure was fully 3 mm. wider on the left than the right side; the movements of the lids were normal. The veins of the conjunctiva were full and tortuous along the upper fornix, but this condition could only be seen when the lid was everted.

The most striking feature of the case was the very apparent exophthalmos. There was forward displacement of the globe to the extent of 15 mm. with little or no lateral deviation and the eyeball was at the same time pressed downwards about 5 mm. below its opposite fellow. The

movements of the globe were normal in every direction except outwards, where the excursion was 8-10 mm. less than on the right side.

On palpation one could feel below the outer third of the superior margin of the orbit, between it and the upper surface of the eyeball, a dense elastic mass with a rounded, slightly nodular margin. The tumour could be traced into the orbit for a short distance on either side. With the ophthalmoscope, increased fulness of the retinal veins was made out, but the fundus was otherwise normal. L.V. =  $\frac{6}{30}$ . not improved. The field of vision for white, red, and green, showed only



slight constriction for the first mentioned colour on the temporal side of the chart. T. n.

May 3rd, 1899. Tumour removed by Krönlein's method. As the details of this operation are still not generally known, we insert a translation of the author's own words regarding the steps to be followed in its performance, as was closely done in this instance.

1. *Skin Incision:* The incision begins in the temporal region at the point where the *linea semicircularis* of the frontal bone is distinctly felt through the skin, *i.e.* about 1 cm. above the *margo supraorbitalis*, and

extends downward along the outer orbital margin as a slight groove, with the convexity forwards, to the level of the upper margin of the zygomatic process of the malar bone, where it turns backwards and ends in the middle of this structure.

The skin incision is then carried down to the bone along the outer orbital margin, and through this periosteal incision the whole of the periosteum is separated from the lateral orbital wall by means of a raspator, a proceeding easy of accomplishment. The point of the raspator is then passed downwards to the inferior orbital fissure in order to fix the spot which forms the point of convergence of the presently described bony sections.

II. *Bony Incisions* : The osteoplastic resection shall include the whole of the outer orbital margin (process. zygomaticus oss. front. and process. frontalis oss. zygomatic) and that part of the outer orbital wall which lies between this limit and the inferior orbital fissure (pars orbitalis oss. zygomatici and anterior part of the ala temporalis oss. sphenoid.). The piece of bone to be temporarily removed has therefore the shape of a wedge whose base is formed by the outer orbital margin (process. zygom. oss. front. and process. front. oss. zyg.), and whose apex ends in the anterior part of the inferior orbital fissure.

The bony incisions are best made with a sharp chisel without any further preparation and especially without loosening the natural connections to which, together with the skin flaps, falls the work of nourishing the separated piece of bone during the early period of healing. First of all the external angular process of the frontal bone is chiselled transversely through somewhat above the distinctly visible and palpable *sutura zygomatico-frontalis* and the bony incision continued forward in a direct oblique line through the lateral orbital wall to the raspator in the inferior orbital foramen. Then follows the horizontal chiselling through of the *processus frontalis* of the malar bone close to its base and likewise carried down to the fissure.

When this has been done the bony piece thus made free, together with the skin fasciæ and muscle flaps of the temporal region, can be so far turned outwards that the entrance to the orbit in its lateral part appears free. The operation is usually simply and quickly performed ; after successful removal of the tumour the skin and soft parts are replaced and held in position by sutures and healing follows without difficulties or disfigurement."

The operation in the present instance varied little from the above description and was performed without any serious difficulty. On turning back the bony wedge the tumour presented beautifully in the wound and was removed with ease.

The patient made an uninterrupted recovery and was discharged May 17th, *i.e.* two weeks after the operation. Although diligent search was made for the patient recently, we were unable to find his whereabouts and cannot consequently state his present condition. The last note on his out-patient card, dated May 26th, 1899, was as follows:—  
 “Wound entirely healed leaving a thin V-shaped cicatrix at the outer angle of the orbit; proptosis now very trifling but there remains slight convergent strabismus ( $40^\circ$ ) and on movement outwards the left eye approaches only to within 1 cm. of the outer canthus and the patient sees double to the left. Fundus normal, L.V. =  $\frac{6}{24}$  (2), not improved. Some loose œdema of the conjunctiva downwards and outwards.”

The extirpated growth represented the enlarged lachrymal gland and was everywhere covered by a thin but firm capsule. The mass measured 35 mm. antero-posteriorly, by 25 mm. from above downwards, and was thicker at the anterior end (20 mm.) than at the posterior end (5.8 mm.), as the tumour tapered off from before backwards. The anterior surface was slightly concave, the external decidedly convex. The tumour had an uneven, in places almost nodular, surface and was of moderately dense consistence.

Microscopical examination showed that the normal appearance of the gland was everywhere obliterated by an overgrowth of typical epithelial cells which tended especially to mass together in certain areas. The septa of the gland were little changed and there was no tendency to any alveolar arrangement.

The growth consisted of a marked atypical development of characteristic epithelial cells and was therefore regarded as *carcinomatous* in character. Dr. Nicholls, Assistant Pathologist to the hospital, kindly examined the growth and arrived independently at the same conclusion.

#### **Systematic Examination of the Excised Eyeball.**

(From the Pathological Laboratory of the Royal Victoria Hospital.)

#### *Case IV.—Glaucoma Absolutum—Extensive Subchoroidal Hæmorrhage Following Iridectomy.*

The patient, a female æt. 55, had an attack of glaucoma in the right eye in September and November of 1898, and again in January, 1899. The last seizure robbed the patient completely of the sight of that eye.

On examination, the media were found to be entirely clear and the optic disc of a peculiar reddish color and seemed to be moderately cupped, T. + 3.

June 24th, 1899, iridectomy was performed in the forlorn hope of preserving the globe *in situ*. Immediately after the iris tissue had been snipped off the corneal wound gaped and the lens presented through the

coloboma. The wound was now enlarged and the lens removed with a vectis, vitreus escaping during the procedure. A quarter of an hour after the application of the pad and bandage the patient complained of severe pain, and intraocular hæmorrhage having been diagnosed, the globe was excised.

Examination of the eyeball showed the cornea flattened and wrinkled and a large mass of dark blood-clot protruding from the gaping wound at the upper corneo-scleral junction. On section, one sees again the gaping scleral wound and through this protrudes a rounded knuckle of choroid pushed forward by a large hæmorrhage, which everywhere extensively separates the vascular from the sclerotic coat of the eye. Within the choroid the retina, shrunken and thrown into numerous folds, is attached only at the optic disc and forwards in part at the *orra serrata*. In the anterior part of the subretinal space is a small amount of extravasated blood which has apparently come from the ciliary process.

*Case V.—Longstanding Wound of the Cornea, Iris and Lens—Chronic Uveo-Retinitis—Secondary Glaucoma.*

Edward B., æt. 32, cut his left eye with a jack knife when he was 9 years old. The organ was inflamed and painful for two or three months but eventually quieted down and caused no inconvenience whatever until one month previous to his admission, when it became for a second time terribly and persistently painful.

Examination showed very marked pericorneal and conjunctival injection, and a distinct corneal cicatrix about  $\frac{1}{2}$  mm. broad, which runs in a vertical direction through the inner third of the cornea and extends from the junction of the upper and middle thirds of this structure at least 1 mm. beyond the corneo-scleral margin. The pupil is almost obliterated, but the iris, the tissue of which is visibly atrophied, is drawn inwards towards the middle of the cicatrix where it adheres. The anterior chamber has become obliterated. V. = no pl., T. + 2.

Section shows the cornea of normal thickness but marked by a prism-shaped cicatrix corresponding to the scar noted. The iris is most firmly applied to the whole of the posterior surface of the cornea, but a portion of it, stroma or pigment epithelium, stretches between the cicatrix and the inner anterior surface of the lens. The ciliary body and ciliary processes are visibly atrophied but hold in a loose manner the opaque and irregularly shrunken lens. The retina as a whole is greatly thickened and marked by the presence of irregular masses of organized tissue, greyish-white in color. This is especially laid down along the retinal vessels at the *equator bulbi* in the upper outer quadrant of the globe and along the whole extent of the terminations of the ciliary processes in the upper half of the eye.

From the last mentioned deposit of tissue a filmy vascularised curtain descends close behind the posterior surface of the lens, to which it sends fine processes, and is loosely attached in the lower half of its extent. The retina is very extensively detached; especially in the lower half of the globe, where it is adherent only at the optic disc and *orra serrata*. The subretinal space is completely filled with a gelatin-like substance of a reddish amber color.

*Microscopical examination:* The corpuscular elements of the cornea are everywhere greatly increased except at the position of the cicatrix, where the stroma is paler and clearer from the presence of scar-tissue. Very little of the iris proper is seen, because the retinal pigment layer is so greatly developed that the thin and atrophic stroma is almost completely hidden from view.

The newly formed curtain behind the lens has the appearance and staining properties of connective tissue; it is continuous with and has been apparently derived from the mesoblastic elements of the retina, which it has caused to be detached from cicatricial contraction upon its peripheral limits. On either side the retina is folded upon itself for a short distance and the apices of the folds are the points of attachment of the post lental curtain.

The retina otherwise shows changes of long standing atrophy, but is also the seat of numerous interstitial hæmorrhages of varying size. The subretinal exudate is composed of extravasated blood in which numerous leucocytes are undergoing metamorphosis into pigment cells. From the membrane of Bruch are developed numerous and particularly large hyaline excrescences (Drusen.).

*Case VI.—Chronic Irido-Cyclitis—Secondary Glaucoma—Sarcoma of the Choroid.*

The patient, a female, æt. 44, had noticed failure of vision of the left eye for the past three years, with pain and redness in the organ for the last six months; at first the pain was severe, but during the last two months her suffering has been less acute.

The left eye showed slight divergence and intense pericorneal injection with large tortuous conjunctival vessels running in at intervals to the limbus. The cornea is hazy and stippled and Descemet's membrane studded with old cyclitic deposits of a reddish brown color. A few deep, interstitial vessels are seen running in from the periphery of the cornea. The anterior chamber is shallow; the pupil irregular and totally bound down to the apparently opaque lens; there is marked ectropion of the retinal pigment layer.

Along the periphery of the inner half of the iris and corresponding to

the greater circular artery, is an elevated ridge of iris tissue which almost touches the posterior surface of the cornea. The ascent of this prominence from the direction angle of the anterior chamber is gradual, but on the side towards the pupil it terminates precipitously. Its summit is covered for some distance by a fine vascular mesh work. V. = no pl., T. n., no fundus reflex.

Microscopical examination shows the conditions as above, but one sees also thinning, discoloration and moderate bulging of the sclerotic in the equatorial region outwards and upwards.

Section shows the anterior chamber filled with whitish lens-like substance which made its appearance during the hardening in formalin. Immediately in front of the iris is a thin rubbery layer of tissue continuous through the pupil, with an exudate of a similar consistence between the posterior surface of the iris and the anterior lens capsule, and in and about the posterior chamber.

Immediately in front of the entrance of the optic nerve and occupying about a third of the vitreous chamber is a large pigmented growth, springing apparently from the choroid coat. The retina on either side is extensively detached and pushed towards the posterior surface of the lens. The large, subretinal space on either side of the tumour is occupied by a reddish, jelly-like exudate. The optic nerve almost in its entirety had been left behind in the orbit. The sclerotic is much attenuated in the position of the staphyloma.

Microscopically, the picture is that of a sarcomatous growth of the choroid complicated by a most intense inflammation of the iris and ciliary body. The tumour is seen to spring clearly from the choroid, which is thickened and infiltrated by the sarcomatous cells for some distance on either side of the growth.

The sarcoma is composed for the most part of spindle-shaped cells which have a distinct fascicular, in places almost alveolar, arrangement. Numerous pigment accumulations are seen here and there throughout the tumour, especially in its peripheral parts, and the growth is rich in large, irregular blood vessels.

The whole anterior segment of the eye, but especially the iris and ciliary body, show a most intense small-round-celled infiltration. The anterior chamber is filled by a yellowish, clear exudate in which are seen everywhere fine, delicate, interlacing fibrils. Dense masses of leucocytes have been thrown out along the anterior and posterior surfaces of the iris into the posterior chamber and around the whole of the periphery of the lens. Elsewhere along the anterior margin of the retina and between it and the processes of the ciliary body, a fine fibrin-

ous exudate is present, in which are seen numerous, branching cells of the type of embryonic connective tissue.

The lens has undergone extensive cataractous changes. The wandering cells of the cornea are moderately increased in number; while numerous clear vacuoles are seen in the deeper layers of the corneal epithelium, resting for the most part upon Bowman's membrane. The angle of the anterior chamber is blocked on both sides by the periphery of the iris and inflammatory exudate. A most intense small-round-celled infiltration of the subconjunctival and episcleral tissues is also seen.



RETROSPECT  
OF  
CURRENT LITERATURE.

Medicine.

UNDER THE CHARGE OF JAMES STEWART.

**An Early Sign of General Arterial Sclerosis.**

FRIEDMANN. "Accentuation of the Aortic Second Sound at the Angle of the Left Scapula, an Early Sign of General Arterio-Sclerosis."  
*La Semaine Médical, July 4, 1900.*

Accentuation of the aortic second sound, heard best at the level of the second right costal cartilage, has long been held to indicate high arterial tension, and it is commonly present in those affected with general arterio-sclerosis. It is, however, not peculiar to, or pathognomonic of, this affection. In this, the accentuation is often just as intense over the carotid arteries, or over the suprascapular fossa. Moreover, Friedmann, of Vienna, is convinced from an examination of many patients, that in arterio-sclerotics the maximum of accentuation is always to be found at a point near the angle of the left scapula, on a line extending from the angle of the scapula to the spine of the seventh dorsal vertebra. The patient should have the arms crossed over the chest, so as to increase the interscapular space, and should breathe naturally and quickly. Stoppage of the breathing, especially in expiration, interferes with the perception of the aortic sound. Friedmann has found that in healthy subjects and up to the age of forty or forty-five, aortic sounds heard over the back have their point of maximum intensity at the level of the spine of the left scapula, but with advancing years this point becomes lower, though never reaching the lower angle of the scapula, unless there is general arterio-sclerosis. He has observed this sign (maximum accentuation at the lower angle of the left scapula), not only in advanced arterial disease, but in the initial stages of this affection, even in relatively young persons (thirty-two to thirty-four years of age). On the other hand, he has not been able to discover it in old persons who appeared to be free from vascular lesions. He

concludes that this is an early and pathognomonic sign of general arterio-sclerosis.

#### **Idiopathic Dilatation of the Colon.**

FUTCHER. "Idiopathic Dilatation of the Colon." *Bulletin of the Johns Hopkins Hospital, May, 1900.*

In this patient, a child four years of age, nothing was specially noted during the first few months, but at the end of a year it was observed that the abdomen was very large. With this there was obstinate constipation lasting six or seven days followed by severe attacks of diarrhoea, the motions being of a drab or whitish colour. During the periods of constipation the child was very dull, but at other times did not suffer and seemed very bright. He had been attended to prior to his admission to the hospital, and was getting irrigations of the bowels twice daily.

On admission, there was a very striking, symmetrical distension of the upper part of the abdomen, particularly above the level of the umbilicus. No definite peristalsis could be made out, even by stimulation with a cold towel. Daily irrigations of the bowel produced in each case fairly large, constipated stools. There was no pain, except at times when an enema was given, due to irregular contractions of the bowel. At present the abdomen was a little softer than on admission and no faecal concretions could be detected.

Futcher reviews the types and causes of dilatation of the colon. There are four classes or types. In the first are grouped cases of simple gaseous distension. In the second are the cases in which there is distension from solid contents,—faeces, foreign bodies or, more rarely, gall-stones. The third class comprises cases due to organic obstruction in front of the distended bowel. The fourth class includes the so-called idiopathic cases. Treves holds that even in these there is always some actual constriction of the bowel. The bowel becomes enormously enlarged and its muscular coats hypertrophied. No change is found in the mucosa. Such was the case reported by Formad and commonly known as the "balloon man."

The subjects of idiopathic dilatation of the colon usually die at an early age, but if under careful supervision, they may live with comfort for some years. In some cases operative measures afford some relief. Usually the operation consists in making an artificial anus, but Treves in one case removed a large part of the colon with success.

#### **Splenic Pseudoleukæmia.**

CABOT. "Splenic Pseudoleukæmia, Historical Sketch." *Boston Medical and Surgical Journal, Nov. 17, 1900.*

The writer briefly alludes to the history of, and the revival of interest

in, this condition, and to the confusion in the nomenclature arising from the many synonyms in use. He inclines to the term "anæmia with splenic enlargement." In going over the literature of the subject, it is very difficult to separate out the cases of leukæmia and of enlargement of the spleen due to various causes like malaria and syphilis, and to distinguish all the forms from the symptom-complex of the condition under consideration.

The cases to be excluded are those with an obvious history of malaria, those in which the signs point strongly to cirrhosis of the liver, and those in which an imperfect blood examination makes it impossible to exclude pernicious anæmia. Cabot only includes such cases as show a marked anæmia with considerable splenic enlargement, without any known cause either for the anæmia or for the enlargement of the spleen, and with no leucocytosis. The symptomatology of such cases is simply that of progressive or relapsing anæmia, combined with the local disturbances and annoyances due to great enlargement of the spleen. Hemorrhage seems to be more frequent a factor than in other varieties of anæmia. The spleen is considerably enlarged in the great majority of cases but not to such an extent as is usual in advanced cases of myelogenous leukæmia, reaching usually to or not quite to the level of the navel. Perisplenitis is relatively infrequent. The liver is usually somewhat enlarged, and the retroperitoneal glands occasionally so. The increase in the size of the spleen is due in most cases to fibrous hyperplasia, the Malphigian bodies being more or less atrophic. This an important finding, if true, and is the opposite of what is usually found in leukæmia and in Hodgkin's disease. In the earlier records stress is laid upon the severity of the anæmia, while in Osler's series, the blood resembles that found in chlorosis.

It is important to distinguish from this condition :—

(1) Cases of idiopathic splenic enlargement without any anæmia or any other symptoms.

(2) Pernicious anæmia in which enlargement of the spleen, sometimes considerable, is almost always present.

(3) Cirrhosis of the liver. The fact that a certain degree of interstitial overgrowth has existed in some of the cases of splenic anæmia, and that there often is an anæmia with cirrhosis of the liver, makes the distinction between these two conditions, especially *intra vitam*, a matter of very great difficulty.

(4) Splenic tumour associated with chronic malarial poisoning. The absence of malarial parasites at any given time, in persons living in a malarial district, is not sufficient to exclude chronic malarial infection.

(5) Leukæmia is to be excluded by blood examination.

(6) The anæmias of children are very frequently associated with splenic enlargement, with or without leucocytosis. In such cases there is usually a history of rickets or syphilis.

Different writers give a very different idea of the prognosis of the disease. According to Osler, it would seem to be a relatively favourable one. Splenectomy has been tried with success in one of his cases. It is reasonable treatment, in view of the fact that splenic enlargement seems to have preceded the anæmia in all recorded cases in which the question has been looked into thoroughly.

H. A. Lafleur.

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## Surgery.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

### Prostatic Atrophy after Castration.

KEYES. "The Evidences of Prostatic Atrophy after Castration."  
*Medical Record, July, 1900.*

In spite of the various means which have been advocated during recent years for the treatment of enlarged prostate, the same measure of success has not been met with in dealing with these cases, in comparison with advances made in other branches of surgery. The class of patients with which the surgeon has to deal, has, no doubt, much to do with the poor results so frequently obtained. They are usually men well up in years, their general health more or less deteriorated by their malady, with a diseased bladder, abnormal urine and, very often, serious lesions of the kidney. It is hardly to be wondered that the mortality in cases of prostatectomy is very high, and that other operative procedures, such as the Bottini operation, are more palliative than curative; indeed, not even palliative, in many cases.

Any objection which might be advanced against castration, as depriving the patient of his testes, does not cut much figure in these cases, owing to the patient's age. Unfortunately the practice of castration does not appear to lead to all the good results, which one might be led to infer, in arguing from analogy. In a series of twelve cases collected by Dr. Keyes, cases in which it was possible to examine into the condition of the prostate subsequently to removal of the testes, in only two was there evidence of beginning atrophy of the gland, and in these the time elapsed after castration was ten and eighteen days respectively, rather a short period for any considerable degree of fibrosis to have occurred.

Dr. Keyes gives the following history of a case which was recently under his care:—The patient, aged 63, was first seen in August, 1898.

He was suffering from intense dysuria. The clinical history dated back to 1897, when he had had an attack of complete retention of urine, which had lasted one week, but from which he recovered so completely that he was able to dispense with the use of the catheter. In June, 1898, he began to have some pain on micturition, and from that time on the pain steadily increased. The urine was bloody and contained muco-pus. On examination, the prostate was large and firm. There was about three ounces of residual urine in the bladder. No stone could be detected. Treatment for relief of the bladder symptoms having proved ineffectual, double castration was performed in October, 1898. But little relief was obtained from the operation, and the patient continued to urinate about every hour, using a catheter. In October, 1899, he returned to hospital for treatment of profuse hæmorrhage from the bladder, and bringing with him a small faceted phosphatic calculus. He refused operation at that time, and it was early in February, 1900, that he consented to have the bladder opened. Epicystotomy was performed; thirty-two stones were removed; and two tumours of the prostate were at the same time enucleated. After a tardy convalescence, the patient was in fairly good health by the month of May following.

The pathological report of the tumours removed, after dealing minutely with the conditions found, states :—"The insignificant amount of fibrous change, the comparative infrequency of dilated or cystic, degenerated tubules, and the very large amount of muscle tissue, would indicate that there had been but a very slight development of fibrous tissue;...the changes noted in the preparation made from the prostatic tissue are no more pronounced than are those frequently observed in many so-called normal prostates."

In this instance, then, after a lapse of sixteen months, little or no evidence of retrogressive change in the gland was found.

It may be that in those cases where improvement does occur, the good effects are the result of the local depletion of blood, and not of atrophy of the prostate. Furthermore, as Dr. Keyes remarks, experiments relating to the normal prostate, do not of necessity apply to the diseased and enlarged gland.

#### **Purulent and Tuberculous Joints Treated by Pure Carbolic Acid and Drainage.**

**PHELPS.** "The Treatment of Tuberculous and Purulent Joints with Large Glass Speculum, Drainage and Pure Carbolic Acid." *New York Med. Jour.*, Sept., 1900.

Dr. Phelps strongly advocates the early incision of suppurating and tuberculous joints, urging that by this means one may discover the parts

of the joint involved, the amount of destructive change which has taken place, and also that the joint may be thoroughly drained. By an early operation, much of the destruction which occurs in tuberculous cases may be avoided, complicated as they not infrequently are by the burrowing of pus through the tissues in the neighbourhood of the joint.

To prevent suppuration after opening one of these joint abscesses, Dr. Phelps uses pure carbolic acid. His method is as follows:—The abscess cavity is laid open, the opening in the capsule found and enlarged, and the joint is exposed. If there is extensive bone disease, the incision is lengthened, and the capsule of the joint freely divided for one-half or two-thirds of its circumference, the head of the bone is pulled out from the socket, the curette freely used, and the joint thoroughly irrigated with bichloride solution, 1 to 1000. The joint is now filled with pure carbolic acid, where it is allowed to remain for exactly one minute, after which the joint is thoroughly washed out with pure alcohol and, finally, with a two per cent. solution of carbolic acid. A large glass tube is then introduced, and packing may be inserted through the tube. A large glass tube not only secures perfect drainage, but it also enables the surgeon to judge from day to day the condition of the joint cavity. If there be further extension of the disease, curetting and the use of carbolic acid may be applied through the tube without disturbing it.

The glass tubes vary from half an inch to two and a half inches in diameter. In length, the tube should reach the surface of the skin and no more. If it has not been necessary to use the curette, the wound may be closed with the insertion of the smaller tube. From nine to twelve pounds extension is applied during the treatment.

*E. J. Semple.*

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## Gynæcology.

UNDER THE CHARGE OF WILLIAM GARDNER.

### Method of Making Applications to the Vaginal Vault.

HOWARD KELLY. "A New Method of Making Applications to the Vaginal Vault." *Amer. Gyn. and Obstet. Jour.*, March, 1900.

Not being satisfied with the present method of making applications to the vaginal fornices, Dr. Kelly has devised a new instrument for this purpose. It consists of a glass cylinder open at one end and at the other tapering suddenly into a much smaller tube, which is bent at right angles to it. Near the open end a short glass tube enters, this tube being connected with a rubber ball by a piece of rubber tubing.

The instrument is used with the patient in the knee-chest position, the perineum being raised by a Sim's speculum. The end of the long glass tube is now inserted to the top of the vagina and a dry tampon placed in position. The fluid to be applied is now placed in the glass cylinder, which is at present in the upright position, after which its open end is closed with the thumb and the instrument inverted. By now pressing the rubber bulb the fluid is forced out into the vault of the vagina and the instrument is withdrawn. The chief advantage claimed for this method of making topical applications is its cleanliness.

An additional instrument described by Dr. Kelly is an adjunct to the usual douche tube, and has for its object the thorough distension of the vaginal walls by the fluid used. This instrument consists of a blunt short cone of hard rubber perforated in its centre by an attachment for the rubber tubing connecting it with the douche bag, and having a stout handle attached to the side. The apex of the cone is inserted into the vagina until the latter is blocked, after which the fluid is allowed to flow into and distend the vagina. After being retained for about one minute or so, the fluid is allowed to escape by partially withdrawing the cone.

#### **Parasitic Tumours of the Uterus and Ovaries.**

HENRY C. COE. "Detached or Parasitic Tumours of the Uterus and Ovary." *Amer. Gyn. and Obstet. Jour.*, March, 1900.

In the study of these conditions the pathologist must largely depend upon the abdominal surgeon for data from which to determine the original site of these growths, as their structure may become so greatly altered as to completely conceal their origin.

Dr. Coe cites the following three cases which had come under his own observation.

Case I.—After the delivery of a woman, 35 years of age, of her first child, a solid tumour the size of a foetal head was discovered in the right side of the pelvis, and a diagnosis of a pedunculated, subperitoneal fibroid was made. Six months after the birth of the patient's second child, she suffered from an attack of peritonitis, which recurred upon several subsequent occasions. The first attack was followed by a constant, steady pain in the region of the right ovary, which pain persisted until the woman was seen by Dr. Coe. At the operation a fibroid the size of a Messina orange was found imbedded in the uterovesical pouch, and to have the omentum adherent to its upper surface. The omentum was separated and the tumour enucleated, there being no sign of any pedicle, the tumour apparently being nourished by means of its adhesions to the uterus and its site of implantation, both of which contained large and numerous vessels.

The operator considered that the tumour was originally a subserous

fibroid of the anterior surface of the fundus, which had become detached by axial rotation. It had then descended into the uterovesical pouch where it had become adherent in addition to its omental attachment.

Case II.—In the second case a diagnosis of pyosalpinx had been made, but operation revealed a solid tumour adherent to the peritoneum of the uterovesical pouch and entirely independent of the uterus and its annexa. Upon making section through the growth, it was found to be composed of cheesy material which contained tubercle bacilli.

Case III.—This was a specimen examined for Dr. T. A. Emmet some years ago. The growth was fibrocystic, and on section was found to consist of a fibroid, which had become firmly attached to an ordinary, multilocular cyst of the ovary. The fibroid was supposed to have originated in the uterus, although no evidence of such an origin could be discovered, it receiving its pabulum from the large vessels of the cyst wall.

These "migratory" (Dr. J. S. Stone), or "parasitic" (author) tumours become detached from their original site and adherent to their new host by gradual torsion and inflammation; while the former is taking place chronic inflammation occurs, plastic lymph is thrown out, and thus fastens the growth to the nearest object. The two processes taking place synchronously, there is no sudden interference with the blood supply, consequently no hæmorrhage into the tumour, or no necrosis which one could get in a more acute form of torsion. This chronic torsion is very difficult of diagnosis but Allan Doran states that "dull, constant, abdominal pain in a patient who keeps in good health and bears a cystic tumour that increases but little or not at all in the health of many months or years, is a suspicious symptom."

#### **Post-Operative Care of Patients.**

HENRY T. BYFORD. "After Treatment of Peritoneal Section." *Amer. Gyn. and Obstet. Jour.*, April, 1900.

The writer has found that where peristalsis of the bowels is procured immediately after operation, the patients suffer from much less disturbance than where this action is deferred. He gives two drachms of fluid extract of cascara, or some equally efficient purgative, two hours before operation. As soon as consciousness is restored after the operation, one drachm of magnesium sulphate is given hourly for several hours and, beginning eight hours after operation, a high glycerine and water enema is given every two hours, one having been given before the patient left the table in all cases where there were pelvic adhesions. This treatment must be carried out until sufficient peristaltic action is obtained, as evidenced by the passage of flatus not only with the enema but between them.



Where much blood has been lost, a large, high, beef-tea enema is substituted for the above, and is repeated every four hours. If made of a sufficient strength, this will usually cause an evacuation of the bowels within twenty-four hours.

### Plastic Gynæcology.

J. M. COTTERELL. "An Operation Performed for Complete Atresia Vaginae." *British Medical Journal*, April 7, 1900.

The patient operated upon was apparently a well-developed woman who had always enjoyed the best of health, and who had suffered from no periodic disturbance. Local examination revealed normal mons veneris and labia majora, but the nymphæ were poorly developed. The clitoris and urethra were normal in every way. Between the meatus and anus was an area of smooth, thin skin, which in the centre was slightly pinkish in colour and moist, but there was no central depression. Rectal examination showed complete absence of a vagina, and bimanually a uterus the size of an almond with correspondingly small ovaries was made out.

With the patient in the lithotomy position, an H-shaped incision was made over the smooth area of skin, the uprights of which ran from the posterior extremities of the atrophied nymphæ to just beyond the anus, with the cross-bar midway between the anus and urethra. The flaps thus marked out were reflected back, and a large opening made in the cellular tissue between the rectum and urethra. A pair of flaps measuring 7 by 3 inches were dissected up from each thigh, the inner incisions starting at the anterior ends of the uprights of the H, and running down and out along the thigh, each external incision beginning just below the point of origin of the tendon of the adductor longus. These flaps were then brought together with their raw surfaces approximating and the edges sutured together, after which the sac thus formed was invaginated into the above mentioned space and packed with gauze, in order to maintain the raw covering of the sac in close apposition with the walls of the previously formed cavity. The edges of the raw surfaces on the thighs were readily brought together when the patient's legs were straightened out, and were held thus by sutures.

Good union was obtained and the passage kept patent by introducing into it an india-rubber bag, which could be dilated by means of a bulb syringe. This was inserted and worn for half an hour, twice daily, after the gauze plug had been removed. As the uterus and ovaries were functionless, no attempt was made to bring the cervix down into the vagina. The operation was an entire success in every way.

F. A. L. Lockhart.

## Society Proceedings.

### CANADIAN MEDICAL ASSOCIATION.

The Thirty-third Annual Meeting of the Canadian Medical Association was held in Academic Hall of the University of Toronto, on September 12th, 13th and 14th, 1900.

*Morning Session, September 12th.*—The meeting was called to order by the President, Dr. R. W. Powell, of Ottawa, and the General Secretary, Dr. F. N. G. Starr, of Toronto, read the minutes of the closing session of the last annual meeting.

The report of the Committee of Arrangements was presented by the Chairman, Dr. Dewar, of Ottawa, an announcement being made of the various entertainments provided for the visiting members by the profession of Ottawa.

#### **A Case of Sarcoma of the Right Nasal Fossa with Acute Sinusitis and Orbital Cellulitis.**

DR. P. G. GOLDSMITH, of Belleville, reported the following case:—The patient was a man of thirty-eight years, a farmer, with an unimportant family and personal history. He consulted the doctor on the fourth of August last with severe frontal headache and double vision. The nasal fossæ were examined and growths found in the right one which, along with some bone, were removed. Then swelling and pain in the right eye began, so that it was seen to project downwards, outwards and forwards. The right nasal fossa was curetted and the tissues sent to Professor Anderson of the Trinity Medical College Laboratory at Toronto, who pronounced them sarcomatous in their origin and nature, of small-round-cell variety, having the walls of the blood vessels thin and poorly developed. The discharge from the nostril had an odor similar to that proceeding from cancer of the uterus. Up to ten years ago, Bosworth had collected forty of these cases.

DR. R. A. REEVE stated that a number of years ago he had presented a paper on the same subject to this association. He directed attention to the importance of examining the naso-pharynx in diseases of the orbit. He recited a similar case to Dr. Goldsmith's. In his case there was little pain, but an examination of the nose revealed the tumour.

#### **The Present Status of the Eliminative and Antiseptic Treatment of Typhoid Fever.**

DR. W. B. THISTLE, of Toronto, said that it was now some seven years since he had introduced this plan of treatment to the profession.

He thought that this plan of treatment of typhoid fever had time and again been misrepresented by Professor Osler and others, as he had never held to the opinion that the eliminative and antiseptic plan could rid such organs as the liver and spleen of the bacilli lodged in them. When once the typhoid bacilli gain access to the intestinal tract, the multiplication of them occurs with extreme rapidity, and the intestinal contents teem with countless numbers of them. These are not confined to the intestine, but are to be found in the walls and, in fact, in almost every organ of the body. He was of the opinion that the draining of the intestine following upon the action of a purgative, such as calomel or magnesium sulphate, would tend to get rid of some of these bacilli in the intestinal walls, but he did not claim that it would affect their exit from the liver, etc. The treatment, Dr. Thistle thought, had been imperfectly applied in many instances without a clear conception of its underlying principles. Dr. Thistle has never had a single hæmorrhage under his plan of treatment, what hæmorrhage occurred having been always very slight, and he has also seen very few perforations. In Toronto, this plan of treatment is universally adopted. The statistics at the Toronto General Hospital show, that from 1893 until the present time, there have been 833 cases in that institution, with 56 deaths, a mortality of  $6\frac{1}{2}$  per cent.

In discussing this paper, DR. MCPHEDRAN said that he had been watching Dr. Thistle's work in this direction from the time of the appearance of his first paper on the subject, but could not agree with all his conclusions. He did not think that this plan of treatment lessened diarrhœa, tympanites, fever or delirium; and considered that Dr. Thistle was harboring the idea that purgatives in typhoid were a new discovery with him. This was not so. Twenty-five years ago, Dr. McPhedran gave these, for the first ten days at least. In addition to this he used to give carbolic acid and iodine, and in a certain class of cases, he had thought he had the exact treatment. Another class would then come along in which that treatment had no effect whatever. He considered that the general toxæmia that existed, could not be eliminated through the bowel. It had to be done through the kidneys and skin.

Replying to the criticisms of his paper, Dr. Thistle emphasized the fact that he was *not* trying to eliminate bacilli from the glands. In clearing out the bowels, he is trying to eliminate *toxins* from the body and not bacilli.

*Afternoon Session, September 12th.*

#### **The President's Address.**

THE PRESIDENT, DR. R. W. POWELL, of Ottawa, delivered the Annual Address, which is published at page 639 of our September Number.

### **Some of my Experiences in the South African War.**

SURGEON-LIEUTENANT-COLONEL G. S. RYERSON, of Toronto, then addressed the Association upon this subject. He dealt first with the experience gained of modern bullets in this campaign. The very latest returns show that 986 officers and 11,701 non-commissioned officers and men have been wounded, of whom only 732 have died of wounds received in battle, which is to be ascribed to the aseptic character of the bullet, and the prompt attention and antiseptic treatment. Dr. Ryerson then dealt with the wounds caused by these bullets. Referring to poisoned bullets being used, this was not the truth, as the tarnish or verdigris when present, probably was burnt off in transit through the barrel. He also doubted the fact of explosive bullets being used. The Boers made use of thousands of Martini-Henrys, a heavy bullet, which caused great destruction of soft parts, necessitating amputation. There were few amputations in this war. He quoted Kendal Franks, who had performed 20 amputations in 2,000 cases. Whilst abdominal section in wounds of the abdomen was mainly inadvisable, he saw one case where the results were excellent. He spoke highly of the magnificent work of the Royal Army Medical Corps.

At the conclusion of this able address, DR. T. G. RODDICK, M.P., highly complimented Dr. Ryerson for his remarks and further spoke of his great sacrifice in proceeding to South Africa at his own expense in order to carry out the work of the Red Cross Association. While in England recently, Dr. Roddick stated, he made it his special business to inquire of returning Canadian soldiers as to the hospital management in South Africa, and although he had spoken to many of these, he had failed completely to find a single Canadian, who had anything but praise for the hospital arrangements in that country.

### **Our Race and Consumption.**

SIR JAMES GRANT, of Ottawa, read a paper on this subject. (See September number, page 673).

### **Some Remarks as to the Treatment of Locomotor Ataxia Based Upon an Experience of Thirty Years.**

DR. ALLAN MCLANE HAMILTON, of New York, presented a paper which was read by the President in his absence. It is published at page 737.

### **The Physician's "Vaster Empire."**

DR. JOHN HUNTER, of Toronto, contributed this paper. It dealt with sanitary science, education, social purity and medical missions. Referring to sanitary science, he entered a plea for the broader and freer application of the principles of this branch of medicine, in the building and constructions of our homes, schools, churches, theatres, etc. No

dwelling house should be constructed except under the supervision of an architect and a physician versed in the principles of sanitary science. Another important question was that of our educational system,—the mental and physical development of our school children. The best way to secure physical vigor and high mentality was surely within the province of the physician to grapple with and study. In all forms of social purity, physicians should speak *ex cathedra* against every form of vice and immorality. The boys and girls of the family should be enlightened as to their sexual proclivities at proper periods by their fathers and mothers respectively. In medical missions, he referred to the vast field for medical missionary work in foreign countries.

*Evening Session, September 12th:*

#### **The Address in Surgery.**

MR. EDMUND OWEN, of London, England, delivered the address taking as his subject. (See page 719).

#### **Excision of the Knee-Joint in Tuberculous Disease.**

MR. A. PRIMROSE, of Toronto, read a paper on this subject which we will publish in our November number.

#### **Recent Pathological Studies of the Blood.**

DR. L. H. WARNER, of Brooklyn, contributed a scientific paper with the above title. At the outset he asserted that he believed there was a necessity for experiments for the progress of pathology. His researches were directed along three lines of inquiry, viz:—experiments, observation, and individual observation at clinics in hospitals. He considered that the examination of the blood in most cases was of more importance than an examination of the urine. Dr. Warner gave the formula of a new staining solution which he had found very practicable:—The blood specimen should be prepared in the regular way. The slides are heated in a hot oven to 98 degrees C., then immersed for one minute in a one per cent. aqueous solution of methylene blue; washed in water; then in a one per cent. alcoholic solution of eosin, washing again with water, and then in a one per cent. solution of Bismarck brown. Dr. Warner's paper was illustrated with suitable diagrams.

*Morning Session, September 13th.*

#### **Some Experience in the Treatment of Hernia.**

DR. F. J. SHEPHERD, of Montreal, contributed a paper on this subject. (See page 753).

DR. LAPHORN SMITH discussed this paper and the cases described, although his experience lay mostly in ventral and umbilical work. In some of these he had seen them so large as to require twenty stitches.

During the past two years he has abandoned silk and resorted to catgut, chromicized, which he always prepared himself.

Dr. Shepherd stated if there was any oozing in the wound he would pass a probe in between the edges to let out the accumulated serum. This he finds to be quite efficacious, as then you minimize the chance of the introduction of any germs from without.

#### **A Case of Syphilitic Gummata of the Spinal Cord Successfully Treated by Enormous Doses of Iodide of Potash.**

DR. F. W. CAMPBELL reported this interesting case. It occurred in a man of highly neurotic temperament who a short time before the onset of symptoms of a definite character, had suffered from repeated attacks of insomnia of a very aggravated character. When this sickness began, there were noticed retention of urine and loss of power in the lower limbs. The patellar reflex was about normal. The loss of power in the lower limbs was absolute. The pulse varied from 80 to 96; the temperature never above 99° F. The stomach remained in fairly good condition all the time. A consultant from New York was brought on and a diagnosis established of tumour of the spinal cord situated about the first lumbar vertebra, which might be sarcomatous or syphilitic. The advice of the consultant was to give 500 grains of iodide of potash per day, commencing with drachm doses three times a day. Dr. Campbell detailed minutely the daily history of the patient while getting him under the large dose and then again whilst it was gradually being withdrawn. The patient is alive to-day and in good health, having recovered complete control of his lower extremities.

#### **The Address in Gynæcology.**

DR. WILLIAM GARDNER, of Montreal, delivered the address, taking for his subject, "Mistakes in Diagnosis and Treatment." It was published in our September number.

#### **An Unnoticed Factor in the Production of Abdominal and Pelvic Disturbances in Women.**

DR. J. CLARENCE WEBSTER, of Chicago, contributed an original paper on the above subject. Symptomatology in women, he said, was often overlooked by the general practitioner. The question of the normal relationship of the abdominal and pelvic contents was dwelt upon and then he proceeded to account for inter-abdominal pressure. He held the view that the pelvic organs as well as the abdominal were to a large extent held in their respective positions by reason of the pressure of the abdominal and pelvic walls. He stated the average sp. gr. of the viscera to be a little more than that of water; the liver was 1.5 sp. gr. He maintained that there was no proof that the mesenterics acted as constant supports or were ever meant to be such. The main factor in

restraining the viscera is the strength of the abdominal wall and pelvic floor. Local weakness of the abdominal wall has been fairly well described under hernia; while general weakness of the abdominal wall has been described as pendulous belly. General weakness in his experience is an exceedingly rare condition. As to the question of etiology, the condition is found in women who have borne children; and so, on examination of the great majority of women, there is found some degree of separation of the recti muscles in the region of the navel. All evidence later on may disappear, but permanent widening remains. The results of all this is unavoidable enteroptosis; and this is generally found in women who have been addicted to the pernicious habit of tight lacing. A very common displacement seen is that of the right kidney. Dr. Webster dwelt upon the diagnostic symptoms of these conditions and then proceeded to describe the operation he performs for their relief. This consists in bringing the edges of the two recti muscles into apposition. He first performed this operation in November, 1898. Since that time he has operated on forty-one cases and the results have been most satisfactory in all.

MR. I. H. CAMERON took exception to the word "unnoticed" in the title of Dr. Webster's paper, as he thought this was not an unknown factor in the production of the conditions mentioned in the paper.

DR. W. S. MUIR, Truro, N.S., asked what affect leaving off the use of the binder after confinements had to do with the production of these conditions.

Dr. Webster held to the opinion that this had not been noticed except by himself, and challenged Dr. Cameron to produce evidence to the contrary. The absence of the binder, in his opinion, had not made any special difference.

*Afternoon Session, September 13th.*

### **The Address in Medicine.**

DR. F. J. SHATTUCK, of Boston, delivered this address which has already been published in the September number of this Journal.

#### **Gastric Hæmorrhage.**

DR. G. E. ARMSTRONG, of Montreal, contributed this paper. He believed there was a fairly well determined field in which surgical interference may be of use in hæmorrhage of the stomach. Hæmorrhage occurs in fifty per cent. of gastric ulcers and is fatal in eight per cent. Cases are arranged in two groups, the acute and the chronic.

Rodman has reported thirty-one operations for frequently occurring or chronic hæmorrhages, with six deaths. Dr. Armstrong has operated five times for gastric hæmorrhage, one being a chronic case. In one of these the patient was getting along nicely after the operation when she

expired suddenly; and on a postmortem examination being made, thrombi were found in the branches of the pulmonary artery.

**Some Cases of Stomach Surgery—Gastrotomies, two cases; Gastro-enterostomies, two cases; Pylorotomy.**

DR. A. E. GARROW, of Montreal, reported these cases, which we will publish in full in the November number of this Journal.

**The Modern Treatment of Retroversion and Prolapse of the Uterus.**

DR. A. LAPHORN SMITH, of Montreal, referred to the proper and most successful management of procidentia uteri in elderly women between seventy and seventy-five years of age,—a most pitiable condition. Except for this trouble the woman may be otherwise in excellent health; the perineum, however, is so relaxed that no pessary will remain in place. Then the majority of these cases had an ulcerated cervix. After confinement the uterus remained large and the pernicious habit of keeping women too long on their backs has a tendency to produce the backward displacement. Dr. Smith feels certain that women who have been relieved of this distressing condition will have little difficulty in persuading others to avail themselves of the treatment. He removed a woman's uterus a few months ago, which had been out of her body for twenty years; and the woman now assures him that she feels like a young woman. In correcting this deformity, Dr. Smith makes a small incision in the abdomen and performs ventro-fixation. After that the vaginal canal is narrowed by a large anterior and posterior colporrhaphy. In selected cases, he also amputates the lower half of the organ, and then stitches the vagina to the upper half. He considers ventro-fixation, if properly performed, a most reliable means of fastening up the uterus. The operation has given him the most complete satisfaction of any operation he has ever performed, especially when combined with amputation of the cervix and posterior colporrhaphy.

**Gasoline as a Surgical Detergent.**

DR. BRUCE L. RIORDAN, of Toronto, contributed an interesting paper on this topic. With this, the dirty, greasy hands of machinists, who are the subjects of injuries in these parts can be effectively and rapidly cleaned without the ordinary brush and soap and water. It is far better for this purpose than any method heretofore devised for cleansing. He now constantly carried a small bottle of gasoline in his surgical bag. A report from Dr. Wm. Goldie, Toronto University, showed its effects upon germs and germ life, a report which would conduce to its employment as indicated. One word of caution was thrown out by Dr. Riordan in its use; as it is a highly inflammable substance, it should not be used in any quantity near an exposed light; and then it is painful in the eyes



or ears. It is also useful in cleansing sutures of accumulated serum, blood and dressing powder, as it frees these particles and enables one to locate the stitches easier and quicker.

DR. J. C. MITCHELL, Enniskillen, Ont., stated that he had tried gasoline recently as a detergent in two very severe threshing-machine injuries, where the parts were all smeared over with oil and grease and dirt; and it was very satisfactory, as he was able to get perfect cleanliness in a very short time, both wounds healing by first intention.

#### **Dilatation and Prolapse of the Stomach.**

DR. ALEXANDER McPHERDAN, of Toronto, presented this paper, which dealt principally with prolapse. This condition rarely occurs alone, but is associated with prolapse of other abdominal organs. There is generally present as well, some degree of dilatation; and the abdomen may be prominent or flat, or even retracted. The case of a man, aged fifty-one years, was referred to, a manufacturer, who had been ailing for two or three years. The stomach was below the umbilicus. He was directed to massage the abdomen very thoroughly and to practice abdominal gymnastics. Through this treatment, combined with dietetics and some strychnine, he has been restored to health and able to resume business. Another case of a woman aged thirty-five years was reported. This woman had been the subject of recurrent attacks of vomiting for two years. The symptoms were detailed; massage and abdominal gymnastics were ordered, with satisfactory results. The different ways of examining the stomach were described; and a change of scene in treating these patients was most beneficial.

SIR WILLIAM HINGSTON discussed the paper at some length. He thanked Professor McPhedran for having brought before the Association so valuable a contribution on so interesting a subject. He said that as a surgeon he, (Sir William), was reluctant to part with anything which might possibly belong to surgery,—but dilatation and prolapse of the stomach he thought properly belonged to medicine. The stomach in cases of dilatation is not usually the sinner, but the sinned against; and one must look for the cause of dilatation rather to the mouth, and to the faulty mode of dealing with the food when there, than to any viciousness in the organ chiefly affected. The common causes of dilatation of the stomach in his opinion are, in brief, eating too much, eating too frequently, eating too fast, eating too great a variety of things (often incompatible with each other), gratifying the palate rather than supporting the strength, and, lastly, drinking too much at or near the time of eating.

#### **Physical Training: Its Range and Usefulness in Therapeutics.**

DR. B. E. MCKENZIE, of Toronto, gave a very interesting account of the methods employed by him in correcting deformities in his ortho-

pædic hospital at Toronto. The paper was illustrated by lithographs showing improvements in spinal deformities after physical training in the direction indicated. The paper embraced the results of his observations for thirteen years past; and was ample justification of the benefits derived from gymnastics in the correction of lateral curvature, club-foot, etc. He had also found physical training valuable in hysteria and chorea, especially the former.

### **Interprovincial Registration.**

DR. T. G. RODDICK, M.P., of Montreal, read the report of the Committee having this matter in hand. A new feature to be incorporated in the measure was that of allowing the homœopaths representation on the proposed Dominion Council, as according to the law of Ontario, they had their vested rights in that province, and so must be accorded similar interests in any proposed Dominion Council. They will be allowed three representatives, which will be equivalent to the representation from any one province of the Dominion. Their term of office will be for four years. Homœopathy, however, as such, will not be inserted in the measure, but will be classified under, "any other school of medicine having legal recognition in any of the provinces of Canada," as the British Medical Council would not recognize any such body. Dr. Roddick stated that the bill would be introduced at the next session; and advised the members of the committee from each province to bestir themselves before their respective provincial parliaments, as these bodies must sanction the measure, before it can be finally acted upon by the Dominion Parliament.

### **Cerebral Abscess.**

DR. JAMES STEWART, of Montreal, reported two very interesting cases of abscess of the brain. Dr. Stewart's paper will appear in the November issue of this Journal.

### **Gangrene of the Leg following Typhoid Fever.**

DR. H. H. CHOWN, of Winnipeg, read a paper which will appear in our November issue.

### **Notes on Atropine.**

DR. R. D. RUDOLF, of Toronto, contributed this interesting paper which will be found at page 747.

The paper was discussed by DR. A. D. BLACKADER, who congratulated Dr. Rudolf upon it and said that he hoped he would pursue his studies of the subject still further. He considered that strychnine and not atropine was the most powerful heart tonic in our possession. He thought that late experiments would throw doubt upon atropine being a direct stimulant to the heart muscle; and he would consider it

questionable practice to administer a drug, when we wanted to stimulate the heart's action, that would paralyze the nerve endings.

#### **Lantern Slide Demonstration of Skin Disease.**

DR. GEORGE H. FOX, of New York City, conducted this demonstration. The great majority of the skin lesions shown were of syphilitic origin; and as they appeared on the canvas, Dr. Fox described their histories. One in particular is remembered from the disfigurement of the woman's face. There was a large mass of excrescences on the nose, which Mr. Fox was successful in getting rid of in the course of two or three months, leaving only a slight superficial scar. He laid down a timely word of caution in treating syphilitic conditions, that when the patient was run down and emaciated through large doses of mercury or iodide of potash, not to keep on pushing these drugs, but to desist for a time, and in the interval endeavor to build up the patient's strength and general condition. When that was accomplished, return to the specific treatment, and the results would be found to be more beneficial.

DR. F. J. SHEPHERD showed a very interesting case, a boy of sixteen years, who at the age of six sustained a very severe cutting injury of the nerves and vessels of the axilla, all the nerves below the cords of the brachial plexus being cut completely through. At that time, ten years ago, Dr. Shepherd dissected out each nerve separately and united their respective ends by suture. All did well with the exception of the musculo-spinal, and as a consequence of this the lad has no control over the extensors of the fore-arm.

#### **The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodide of Potash Internally and Pilocarpine Hypodermically.**

DR. G. H. BURNHAM, of Toronto, reported two cases successfully treated by his combined method. Under this method a permanent result is got. This treatment has a wide application. Whether iodide of potash, or mercury, or the iodide alone, be given internally, in suitable cases without satisfactory results, if the pilocarpine be added, good results will always follow.

#### **Mental Sanitation.**

DR. R. W. BRUCE SMITH, of the Brockville Asylum, contributed the last paper. It was a plea for prophylaxis in insanity; and he thought that much would be accomplished in this direction during the twentieth century. Insanity was on the increase in Canada, and it can be ascribed to the fact that, while these unfortunates are well taken care of when they become insane, there have been no preventive measures employed. In order to accomplish good in this direction, we must seek either to lessen the demands on, or to strengthen the resisting power of the brain.

He condemned inter-marriages in families and also amongst those of a deranged mentality. Fifty per cent. of the cases of insanity were hereditary, and the descendants of these should be careful in contracting marriage ties. He referred to a portion of one county in Ontario alone, where indiscriminate marriage and inter-marriage has become most fruitful; and he has seen several members of one family from that locality inmates of the same institution at the same time. He considers that the day may yet dawn when we will give the same attention to the rearing of children as we now do to the breeding of horses. Speaking of farm life and the tendency it has to melancholy, he thought this class of the community should receive education in participating more in the enjoyments of life, and not to continue to rot in domesticity. An upheaval in the sentiment and surroundings of the rural homes would work wonders in prophylactic principles.

#### **Dominion Anti-Consumptive League.**

The Canadian Medical Association endorsed the scheme for a Dominion Anti-Consumptive League, and recommended the following as provisional officers:—Honorary President, His Excellency, Lord Minto; President, Sir James Grant, Ottawa; Secretaries, to be the secretaries of the different provincial boards of health. Secretary-Organizer, Rev. Dr. Eby, Toronto; Treasurer, J. H. Courtney, Esquire.

#### **Medical Defence Association.**

The Association also recommended the formation of a Medical Defence Association and appointed Dr. V. H. Moore of Brockville as permanent chairman to work up the scheme.

#### **Election of Officers.**

President, H. H. Chown, Winnipeg; Vice-Presidents for the Provinces as follows:—P.E.I., H. D. Johnson, Charlottetown; Nova Scotia, A. J. Maiter, Halifax; New Brunswick, T. D. Walker, St. John, Quebec; A. Laphorn Smith, Montreal; Ontario, A. A. Macdonald, Toronto; Manitoba, J. A. Macdonald, Brandon; N.W.T., J. D. Lafferty, Calgary; British Columbia, S. J. Tunstal, Vancouver; Treasurer, H. B. Small, Ottawa; General Secretary, F. N. G. Starr, Toronto. Next place of meeting, Winnipeg.

Sir Wm. Hingston and Dr. F. W. Campbell, Montreal, were appointed on the Board of Governors of the Victoria Order of Nurses.

THE

# Montreal Medical Journal.

*A Monthly Record of the Progress of Medical and Surgical Science.*

EDITED BY

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JAMES STEWART,  
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VOL. XXIX

OCTOBER, 1900.

No. 10.

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## SERUM THERAPEUTICS AS A BUSINESS.

It was quite to be expected that the recent studies by competent scientific men of the properties of the blood serum of various animals, treated or untreated, in laboratories, and the practical application of such knowledge, by qualified practitioners, to the cure of disease, should lead to the vulgarization and "commercialization" of the method, and that non-medical persons (wrongly called the laity) should seek to turn an honest penny by trafficking in "serums" or "lymphs" of various kinds without having the seal of scientific approbation stamped upon their wares. In truth, these serum-jobbers might well plead in excuse that just as worthless, if not harmful, agents have repeatedly been foisted upon the public by large and well-known manufacturing drug firms, under the supervision and sanction of supposedly, qualified investigators, "in our own laboratory," and not infrequently also by unscrupulous physicians, in search of a more rapid accession of wealth than that afforded by legitimate medical practice.

Among the latest of these medicaments is "The New Animal Therapy in the Treatment of Disease" (The Roberts Lymph Compound and The Roberts-Hawley Lymphs). This precious nostrum had its origin in Chicago and, from a pamphlet now before us we see, that its

sphere of action has been extended to the population of the Maritime Provinces, where a number of "institutes" (one at Truro, N.S.), have been established. These institutes, at least in some cases, are, we regret to say, in charge of practitioners holding a license to practice in the country.

The promoters of this particular serum treatment are very careful to state that their pamphlet "is not used as an advertisement," that "the physicians who are using the lymph are of high standing and ability," that "no advertising, guaranteeing, or other unprofessional conduct, is tolerated," and that "the ingredients of the lymph are published and no secret formulas are used." A very cursory glance at the document, however, shows that it is a money-making affair, pure and simple, and the absurd claims made for the efficacy of the lymph, in some twenty-five or thirty diseases of widely different etiology, is enough to stamp it as a fraud.

There are some redeeming features in this pamphlet—it is distinctly humorous in places. To wit, the description of the source and properties of the lymph.—"We use the healthiest, richest in tissue elements, and hardiest animal known, in the fourth or fifth month of life, when the cells are most active,—the *Rocky Mountain Goat*. This animal is specially bred, and is dieted and watched from birth until it is used."

Possibly this particular kind of goat was selected as it was rather rare and hard to get, and consequently justifies a high price being put upon its valuable body juices. No doubt a Harlem goat would be infinitely cheaper to get, to breed, and particularly to "diet," but possibly inferior in "vital principles," (certainly in moral ones).

Among the many benefits claimed to be conferred by this goat-lymph, apart from the cure of definite diseases, are the rejuvenation of the old and the arrest of senile decay (whether premature or not), "increased agility and suppleness of movements" being naturally the first and obvious result to goat-lymph injections. It is also interesting to note that there is a "restoring of strength and health to the generative organs"—which was to be expected, knowing the goat.

The interesting pamphlet does not inform us whether those who have undergone the treatment are more prone than their fellows "to play the goat," but it must be so, and as there are enough human "goats" in the world, we would advise our readers and the public generally, to refuse "to play the goat under—Roberts" or any other equally silly nostrum.

#### MEDICAL DEFENCE.

We cannot by any words of ours place more forcibly before our readers the terrible hardship inflicted upon the practitioner who becomes the victim of a scheme of blackmail, than did Dr. Powell in his

Presidential address to the Canadian Medical Association at Ottawa, printed in last month's number of this Journal. The practitioner so persecuted is bound in self-defence to preserve his honor, professional reputation and his standing in the community, even if in doing this he, through the machinations of disreputable lawyers—and only disreputable lawyers take up such cases—is harrassed for long months, as the case passes from court to court. He preserves that reputation and standing in the community at a terrible personal cost and at a risk, it may be, of being rendered penniless.

So terrible is this trial that all of us sympathise with the victim of blackmail and, as a matter of principle, are agreed that the profession as a body, rather than the individual, should undertake the defence in cases of this nature. It is not right that the individual should suffer so greatly in maintaining along with his own honor, the fair fame of the profession as a whole. Nay more, we all recognise that the essence of blackmail lies in this, that those who bring suits of this nature against practitioners, rely upon the isolation of the practitioner; they know full well the pecuniary loss involved in defending a case and the horror felt by right-minded individuals in being even suspected of malpractice, and they expect that rather than go before the courts the practitioner will consent to be fleeced, knowing that if he does not so consent, he runs the chance of social and financial ruin. The very union of the profession to contest such a case, the knowledge that a corporation adequately endowed with funds and able to summon to its aid the best legal advice is prepared to fight the case, would largely put a stop to blackmailing.

From every point of view, therefore, we acknowledge the advisability of establishing in this country a scheme of Medical Defence, and we are delighted to see that the Canadian Medical Association has taken up this matter and has appointed a committee to report upon the subject at Winnipeg next year. This we trust means the certain establishment of a Medical Defence Union in Canada.

But while we are glad to see that this committee has been appointed, we realize that it has a difficult task before it in determining what scheme to propose or to approve. The experience of the Medical Defence Union in Great Britain is not very hopeful. We do not mean to say that as a body the British Defence Union has not accomplished great good; for it has. Thanks to its existence cases of blackmail have been singularly rare, and large numbers of such cases in Great Britain, have been arrested at their very onset. It has, however, undoubtedly been found that that Union has been constantly inadequately supplied with funds; it has not nearly received the support that it should from the profession at large.

The reason why this should be so is, we think, easy to understand. That Society depends upon the annual subscriptions of voluntary members. Now, as Mowgli was forced to remark, men are blood relations to the Bandar-log, and like the Bandar-log the individual man and individual practitioner, tends to regard himself as superior in cleverness and in knowledge to the rest of the jungle. Most individuals think themselves too circumspect in their dealings with their patients ever to place themselves in such a position as to render themselves liable to blackmail. And so the majority, feeling assured that they will never be in need of aid from a defence union, fail to recognise the advantage, nay the duty, in paying the annual subscription to the funds of such a union.

We in Canada must, it seems to us, employ some other method. As suggested by our Montreal Medico-Chirurgical Society, it would seem well that this matter of medical defence, should be taken up by some body or bodies already in existence, by the various Provincial Colleges of Physicians and Surgeons or better, by the Canadian Medical Association, as representing the whole Dominion—and that the funds necessary for carrying on this defence union, be obtained other than by annual subscription. Doubtless several schemes will be suggested and discussed; we would, however, urge that this committee shall keep before it the following main principles:—

1. To have the most powerful organization of the profession as a whole that is possible, so that in the start the would-be blackmailer will clearly recognise that he has to fight a powerful corporation.

2. To keep the running expenses in connection with the defence organization at the lowest possible figure. This again is favored by having the matter taken up by some corporation already in existence and already having a staff of officers.

3. Not to depend upon annual subscriptions limited to the one object of medical defence, but to elaborate some scheme whereby every practitioner obtaining his license to practice or already in practice, contributes a small sum to form the main nucleus of the defence fund, everybody so contributing being protected by the defence union or the corporation undertaking this work (provided that upon examination it be found that the case is truly one of blackmail).

We would suggest that this defence fund be administered by a central body in such a way that should a case requiring defence occur in any province, that province should be apportioned a contribution out of the main defence fund, proportional to the number of active contributors in that province.

Further, we suggest that this contribution proving inadequate to



meet the costs of the same, a small assessment be levied upon members of the profession in that province, it being understood that those failing to meet this assessment thereby forfeit the right to be defended in case they become subjects of blackmail, the central committee having in addition the right to contribute still further from the main fund to the costs of a case provided this assessment be found still inadequate.

By some such scheme as this the contributions and the expenses would be at a minimum; the funds would be elastic and in case of need could be suitably increased.

While we recognise on the whole, that the Canadian Medical Association is the most suitable body to take up this matter, there is yet one weak point in the organization of the same to which we might here call attention. We refer to the fact that membership in this Association is annual in the very narrowest sense. To a very large extent, only those who contribute to the funds of the Association put in an appearance at the annual meeting. Thus the membership is by no means a constant quantity and to this, and to the same extent, the corporate life of the Association is feeble. More ought to be done to insure the continuance of individuals from year to year. To this end Dr. Blackader's proposal that the transactions of each succeeding year be printed in a separate volume, is a step in the right direction. If the Association can present something tangible to its members, those members will be more willing to be permanent contributors to the funds than if the yearly meeting is the sole evidence of the Association's work and vitality.