AN ADDRESS

ON

TUBERCULOUS LESIONS FROM A CLINICAL
POINT OF VIEW.*Being the Address in Surgery delivered before the Canadian
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MR. PRESIDENT AND GENTLEMEN—Though the substance of the Address which I have the high honour of presenting to you 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 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, 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 away from pathologists and morbid histologists—to play truant, as it were, from his unbending schoolmasters. In recent years there has been a little too much inclination to apotheosise 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 emphasise 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 and Scott," I found to my dismay that *κλινη* was not only that on which one lies, a couch or bed, but, secondarily, a *bier*. 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; so that the pathologist might have right on his side when he claimed that clinical instruction, begun at the bed-side, and carried, perhaps, into the operating-theatre, is not 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 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 behoves the surgeon to do all that he can towards welding the pathological details of his cases with the clinical features, so as to represent to his class that the two aspects are inseparable, and must always 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 on the fresh specimen in what respects the morbid conditions harmonise with or differ from the account which he had described. 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 condition as it exists in the wards than canned salmon is like a fresh-run fish.

The clinical surgeon has sometimes been a little too much under the influence of the experimental pathologist and bacteriologist. When an 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 Hygieia some mongrel curs or a few of those tail-less rodents which, so far as I can see, have been provided solely for the use of the experimentalist; then, because such and such a thing happens in such and such circumstances in the laboratory to the dog or the guinea-pig, the 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 hinder 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 valuable collaboration. But if there is one matter more than another in which the work of the experimentalist has led to faulty generalisation from a clinical point of view, it is with regard to the course of certain tuberculous lesions. Nor will anyone think, I trust, that I would underrate the value of the work of the experimental pathologist; it certainly is not so, for 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, 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 devoid of 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 organised to carry on a never-to-be-ended warfare against the disease. Taking its birth upon the Continent, the scheme has received a considerable amount of support in Canada, in the United States, in England and elsewhere, and its effect cannot be but for good.

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 of this fact we have ourselves only of late entirely realised. The public, therefore, must be allowed a little time before they generally accept it. But accepted it must be, and it behoves 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 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 dreadful 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, and careful clinical study and microscopical and experimental work 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-joint, 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?

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 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 also have begun to believe it: but the public will believe anything that they are told if only they are told it 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 bonesetters, vendors of patent medicines, and other quacks, qualified and unqualified, flourish like a green bay tree in a 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 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 vertebrae have undergone 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 even 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 sapsur*; but fortunately one 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. 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 number 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. At the end of the 19th 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 is not only important but actually interesting. One rarely hears speak now of the *vis medicatrix Naturæ*; surgical zeal has apparently rendered it not only obsolete but superfluous.

Another instance of the favourable course which severe tuberculous disease may run in the absence of 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 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 favourite 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 the foot is removed the boy will die. This is an unwise thing for any surgeon to say, for he cannot possibly know for certain 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 recollect 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 serviceable. The skin has remained unbroken and the man 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.

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. 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.

Sometime 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 odour, some few of her young men "paying guests" actually appeared to recognise 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 iodoform, just as I have for the lady who deems patchouli to be indispensable for her toilet.

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 scarcely 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 hurried into bringing forward his work ere he had assured himself that the results of his injections justified their 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.

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 *confères* 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 bonesetter would be unfair, for the blundering bonesetter 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 vertebræ 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 effecting 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. This 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 line of treatment for himself, or 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 suitable, namely, in a certain few of those in which pressure by bone, or by organising 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 by, 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 early 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 even to 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, and 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, and 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 daggers!

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 ensuring 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. This, I feel sure, is the only way of successfully inaugurating the treatment of *rest*. But it is of little use if, when in bed, the patient is allowed to roll about, to 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 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 patient 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. I think it probable that after all the stir about the new treatment of hump-backs by forcible straightening has subsided, the chief beneficial outcome will be that every surgeon feels 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 the 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 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."¹

Naturally one turns also to see what Percivall 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 vertebrae, 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 with the times!" Pott 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 by compiling "copy" of precise length, and in a limited time, for medical publishers!

However, Pott has a few pregnant remarks to make about the treatment of the later stages of spinal disease, but I am afraid that they will not prove quite acceptable to most modern surgeons any more than my own poor words 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 boddices," 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 perfect inutilty; 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 parent's or the patient's confidence than does the bidding of him to do some greater 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, strange to say, 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 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 reform. 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 rubbishing photographs. The table or chest of drawers is spread with an uncleaned 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—the bright and sunny world in which his happy 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 had 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 front of the vertebrae 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 dessert-spoonful or even a tea-spoonful 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 Manilla 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 his 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 he is improving, and steadily increasing in weight.

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 everyone.

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 persons 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 ungenial. 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 a quite 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 worth my long journey or your short one—I shall conclude with Hamlet's retort:

Why, right; you are it 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 to me like going amongst strangers, though it is my first visit here; it arouses in me a feeling somewhat like that experienced by a man who is taking 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 peoples 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 endeavouring 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 feeling 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 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 to Halifax—where, in 1812, my good father was born.

REFERENCE.

¹ *Observations on the Diseases of the Joints*, 1850, p. 342.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF PUERPERAL ECLAMPSIA TREATED BY PILOCARPIN.

ON January 20th, about 1 P.M., I was called in consultation to a case of eclampsia persisting *post partum*. The patient, a primipara, aged 23, of slight build, dark complexion, and somewhat anæmic, had previously enjoyed good health, and convulsions had set in, without premonitory symptoms, with the commencement of labour about 6.30 P.M. on January 19th.

Labour was completed by rapid dilatation of the os, and a healthy male child delivered by forceps. The bowels were freely opened by croton oil $\frac{mij}$ placed on the tongue, the patient being unconscious. Chloroform was given during the seizures, which some time after delivery commenced to increase in frequency.

When seen by me clonic convulsions were recurring about every five minutes. The temperature was 100°, the pulse 140, the extremities cold, the pupils dilated and equal, and there was strabismus.

Uræmic origin being suspected, pilocarpin $\frac{1}{16}$ gr. was injected pretty deeply into the arm, and a "poor man's bath" improvised by means of several hot-water bottles wrapped in pieces of blanket and placed under the bedclothes. Within ten minutes there was profuse diaphoresis, and warmth returned to the extremities. When this condition was

thoroughly established the convulsions ceased, and did not return during the two hours I remained with the patient with the exception of one slight seizure near the end of that time which lasted but a second or two. It was intended to repeat the dose of pilocarpin if required, but the prompt response of the system to the very moderate dose already given made this appear unnecessary; so that treatment was continued by the hot moist pack and poultices to the loins. With the exception of a fair amount of salivation, no untoward effects followed upon the administration of the drug.

The patient made a good recovery; had no more convulsions; but did not recover consciousness until early on the morning of January 21st.

I think the details of this case may be worthy of mention, as I have seen but little mention by obstetric authors in favour of the use of pilocarpin for the treatment of such cases. It is possible that this drug may be of some diagnostic as well as therapeutic value in cases where uræmic or other toxic conditions are present.

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ANTISTREPTOCOCCUS SERUM IN ERYSIPELAS.

DR. HARRISON's account of the successful treatment of erysipelas by antistreptococcus serum induces me to mention a case which occurred in my own work, and which, in the discussion on another subject (the treatment of pneumonia) I incidentally referred to at a meeting of the Clinical Society of Manchester, early in 1898.

Mrs. S., aged 63 years, when first seen on December 28th, 1897, presented an erysipelatous patch on the forehead extending down the nose. After a brisk saline aperient, she was ordered tinct. ferri perchlor. 30 minims every three hours, and the forehead was dusted with flour. On December 29th the erysipelas was extending up the scalp and across the forehead, and the temperature was 101°. Drachm doses of perchloride were given, and the forehead was painted with friar's balsam. On December 30th the erysipelas was spreading; the temperature was 103°. On this day I had to leave home, and handed the case over to my partner, Dr. MacMillan. The condition of the patient went from bad to worse. On January 3rd, 1898, the patient was delirious, and the temperature 104°. Dr. MacMillan called in Dr. Graham Steell, who, while approving of the treatment, feared the most grave issue. On the following afternoon, January 4th, I returned home, and found the patient quite unconscious; the temperature 105°; and pulse indefinable. The appearance of the head and face reminded one forcibly of what one used to see long ago in cases of bad confluent small-pox, the features, eyes, nose, mouth, and ears being quite indistinguishable. At 8 P.M. I injected 20 c.cm. of antistreptococcus serum (Burroughs and Wellcome), 10 c.cm. beneath either scapula. The patient was fed by the rectum. At 6 A.M. on the following morning, January 6th, I found consciousness returning. The temperature had fallen to 102°; 10 c.cm. of serum were injected. At 10 A.M. the patient recognised my voice; the temperature was 102°; 10 c.cm. serum injected. At 6 P.M. the patient was quite conscious, and endeavoured to articulate. She had taken some nourishment by the mouth. The temperature was 100°. On January 7th, at 8 A.M. the temperature was 99°, and there was a striking improvement in the head and face. From this time recovery was rapid and uninterrupted.

I greatly regret I cannot recollect and acknowledge the source from which I derived the suggestion to use the serum.

Manchester. H. LESLIE JONES, M.D., M.Ch., F.R.C.S.I.

AMERICAN THERAPEUTIC SOCIETY.—The American Therapeutic Society was organised May 1st, 1900, in Washington during the session of the Congress of American Physicians and Surgeons. According to the statutes of the new society, "reputable physicians who are engaged in the regular active practice of medicine, and who are interested in the study of materia medica and therapeutics in any or all their branches, and such reputable physicians not engaged in active practice but who are engaged in legitimate experimental therapeutic research, shall be eligible for active membership." The president is Dr. Horatio C. Wood, of Philadelphia; the vice-presidents, Dr. Howard H. Barker, of Washington; Dr. Reynold W. Wilcox, of New York; and Dr. Eli H. Long, of Buffalo.