be taken to thoroughly cleanse the hands after handling the plaster, otherwise some of the gum may cling to the fingers and be rubbed upon the face, as frequently happens. Where this occurs it excites a facial erythema with œdematous swelling, which has often led to the erroneous diagnosis of facial erysipelas. If understood, and a soothing application is used, it does no harm, except the temporary inconvenience and possible scare, the facial erythema usually subsiding in from twenty-four to forty-eight hours.

SCIATICA.

CLINICAL LECTURE DELIVERED AT THE UNIVERSITY OF MARYLAND.

BY I. E. ATKINSON, M.D.,

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GENTLEMEN,—The patient before you is forty years of age, German, married, and a laborer by occupation. He has suffered irregularly since 1870 from rheumatism, which he contracted during the Franco-Prussian war. Four years ago he had an attack of rheumatic fever, and was ill for seven months. At that time he had some indeterminate trouble with his heart, the character of which he is not able to tell us. I may say, in passing, that there are no traces of it left. He has frequently had rheumatism in his leg since then. The present trouble began three weeks ago, while at work. The pain came on suddenly, shooting down the posterior aspect of the right thigh and leg. The pain is present both by day and by night, but is greater when he is quiet than when he is walking. He does not think he has had any fever during this attack. He does not remember to have had scarlatina or dropsy, neither has he had syphilis. His appetite is good. His bowels are regular, and he is free from cough. He is a moderate drinker. You can see that he is a fairly well nourished man, of medium size, and decidedly pale. His tongue is moderately coated. He has no sore throat now, nor is he subject to it. He has no pulmonary or cardiac trouble. His digestive functions are fairly well performed, and were it not for the pain that he has in the right lower extremity he would be able to work. This pain keeps him in almost constant distress. There is a slight increase—not important, however —in the area of liver-dulness. His splenic area is normal. He complains of pain in the neighborhood of the sacro-sciatic foramen, a pain which is increased upon pressure. There is also pain along the course of the sciatic nerve, over the head of the tibia, in the popliteal space, and pressure over this region gives pain. He has no pain, however,

at the head of the fibula. His patellar reflexes are slightly exaggerated. There is no change in his cutaneous sensibility, but in walking he shows a decided limp. The pain he experiences while walking is similar to a cramp. It is always worse in damp weather, especially at night when he is lying still, so much so that he sleeps but little. The pain is constant, and does not occur in paroxysms. He has no albuminuria.

You will see that he is a muscular man, and there is no sign of atrophy in his extremities. As I press upon the space behind the trochanter major, he has pain. There is no pain in the neighborhood of the sacrum. You notice that the pain is upon the posterior and external surface of the thigh, that it runs down along the external surface of the limb, and that it stops at about the external malleolus. In other words, this pain follows quite accurately the course of the great sciatic nerve and its distribution. The chart shows practically no fever. Upon one occasion his temperature went up to 99$\frac{3}{5}$°. His pulse ranges from 72 to 90, without any regularity; some mornings it is 90, and some evenings 90. This may result from excitement, exercise, or similar causes.

This other patient is, as you see, also a stout man, a German, twenty-nine years of age, and a laborer by occupation. He has been in America since last March. He is a married man. His father died of phthisis, and his mother of some unknown trouble. He has one brother and three sisters, who are living and well. He has always been hearty until his present attack. He never had rheumatism, scarlatina, or syphilis. He is a moderate drinker. His present illness began last August with pain in the back so that he could not stoop. One or two weeks later the pain extended to the right lower extremity, and was confined to the gluteal and sciatic region, then slowly extended to the fibular side of the leg. It has appeared exclusively upon the posterior and external surface of the lower extremity. He has always been of a constipated habit, his bowels moving every three or four days. He has been in the hospital since September 19, without showing any satisfactory improvement until recently. He gives, as did the other man, the general history of good health. He has no febrile movement, his tongue is only slightly coated, his digestion is good, he is rather constipated, but generally seems to be healthy. I have a memorandum here that in 1881 he spat blood, but it was due to an injury to the back, and no bad effects followed. His heart, lungs, etc., are sound, the various reflexes are normal, and he has no albuminuria. His pain has been very severe. It appears generally along the line of

the sacro-iliac synchondrosis. He also complains of pain at the sacro-sciatic notch, in the popliteal space, over the head of the tibia, also over the head of the fibula and at the external malleolus, but there is no pain on the inner side of the ankle. Another very important modification of sensibility that I wish to call your attention to is that upon the cutaneous surface of his peroneal region there is almost an absence of sensation, very marked in contrast with that of the other side and the inner aspect.

Both these men suffer from sciatica,—a neuralgia of the sciatic nerve. This affection may show itself in limited localities, but very often one can map out very accurately the course of the sciatic nerve and its distributions. You know the sciatic nerve emerges through the sacro-ischiatic notch and then passes down the posterior aspect of the thigh, dividing into the internal and external popliteal nerves. Then the inner one merges into the posterior tibial nerve, passes down, and runs around the foot below the internal malleolus. The external popliteal or peroneal nerve and its branches pass to the external or fibular side of the leg. When the pain of sciatica makes its appearance, it will show itself in part or all along the course of the nerve. There are certain points at which tenderness is especially noticeable. The first is the sacro-iliac synarthrosis. (It is practically always unilateral, and we get these painful points, as a rule, on one side only.) The second point where one experiences pain is at the emergence of the nerve between the tuberosity of the ischium and the great trochanter. Usually the next most painful places are the popliteal space, and again over the head of the fibula, and often at the external border of the patella. Then, again, we have painful points along the external fibular region, but by far the most common of these is just on the outside of the ankle. Again, these painful points sometimes radiate over the dorsal and plantar surface of the foot. The pains that the patients complain of are cramp-like, or, again, like a sensation of great heat or of cold, or a dragging, drawing pain, with occasional exacerbations. Very often, during an examination of the patient, pushing against one of these painful points excites spasms of pain. Sometimes pain begins at one localized point, as, in this man, at the external malleolus. The pain is much exaggerated by walking. At first the man limps, and then walks along pretty well. Or the pain may occur when the patient is absolutely quiet in bed. Under ordinary circumstances there is no alteration in the volume of the muscles, no sign of paralysis, although at times we have other modifications of sensibility than those of pain. Our second patient shows a decided anæsthesia upon the

fibular side of his leg. Sometimes, instead of anæsthesia, hyperæsthesia is observed. Sometimes the patient feels as if the pains were pricking the skin, and at other times as if insects were crawling over it.

An attack of sciatica is often extremely persistent, and it may last for weeks or months. Most cases, however, ultimately entirely recover, although there may be returns of the affection from time to time. Our first patient, for example, states that he has had numerous attacks of rheumatism in his leg. These attacks were very probably sciatic in their nature, and not pure rheumatism. The electric excitability of the leg is often unchanged. In the second patient the muscles of the right side respond to both currents more rapidly than those of the left.

This disease, sciatica, may be a pure neuralgia, but is more often symptomatic of a neuritis, rheumatic or due to other causes. A pure sciatica is a pain without inflammation, a functional disorder of the nerve. It occurs much more frequently in men than in women, and very rarely in childhood and early adult life,—usually between the twenty-fifth and fortieth years. It is rare after the sixtieth year. The causes are many. It may be due to a prolonged contact with cold. A patient may sit upon a cold stone or metallic surface, or perhaps upon a lump of ice, for a protracted period; he may be exposed to the weather for a long time and his legs or feet become chilled. A man may sit upon a narrow fence-rail or a bar of iron for a long time, thus making circumscribed pressure upon the thigh. This may be sufficient to excite an attack of the disorder. Then, again, we have sciatica arising from other causes, within the body. There may be troubles about the pelvis, malignant growths, etc. In women pregnancy sometimes excites it. Sometimes a loaded condition of the bowels, impacted fæces in the sigmoid flexure, or pressure at any point upon the sciatic nerve may be sufficient. Rheumatism is no doubt a cause of the symptoms of sciatica, and occasionally decided symptoms follow that very interesting disease (by which we can always map out the distribution of spinal or cranial nerves) called "shingles." I must make some reservation here, however. Sciatica, as I have said, is purely neuralgia, but we use the clinical term "sciatica" to express the symptoms which correspond to this pure neuralgia, whatever may be its cause. It is hardly proper to call a rheumatic inflammation of the sciatic nerve pure neuralgia, yet the symptoms it excites may be the same. It is hardly fair to attribute the pain which follows shingles to pure sciatica, although it is undoubtedly due to an inflamed condi-

tion of the fibrous sheath of the nerve. When we use the term sciatica, therefore, in the strictest sense, we refer to pure neuralgia; but where we are unable to say positively what is the exact pathological change, we call it sciatica, because of the symptoms it presents. You will find, however, that some authorities speak of it as pure neuralgia and assert that the rheumatic sciatica is a disease much more rare than is usually supposed; but I am convinced that it is more frequent than many admit.

The course of the disease, as I have said, is protracted, lasting usually for a number of weeks, often for months, and sometimes for years. Many persons will have attacks which last a few weeks and then disappear. After a short interval there is a recurrence. Just as regularly as certain persons suffer from neuralgia of the trifacial nerve, so we have this recurrence of the neuralgia of the sciatic nerve in many individuals. However, there may be but one attack. The general prognosis is fairly good, although we often get very much discouraged. Of course, when a sciatica is systemic, or originates within the pelvis from malignant growths or otherwise, the gravity of the prognosis depends upon the character of the exciting cause.

The diagnosis is usually easy. There are, however, differences which it is necessary for us to consider. First, the difference between simply pure neuralgic sciatica and sciatica due to certain other influences. In these cases we make our general diagnosis of sciatica, but treat them according to the causes which bring them about. Now, for example, in the case of rheumatism. Patients with rheumatism and with a distinct rheumatic history suffer occasionally from distinct symptoms of sciatica. The etiological diagnosis in these cases is not important so far as the sciatica is concerned, but is important so far as concerns treatment. The recognition of sciatica that follows the various conditions of pregnancy or malignant tumors in the pelvis is, of course, important. The diagnosis so far as symptoms are concerned amounts to nothing, but the diagnosis so far as pathology and treatment are concerned amounts to a good deal. Ordinarily little need be said as regards the diagnosis of sciatica from the neuralgia of herpes zoster cruralis. In infancy the severity of the disease is shown by the eruption. After the eruption fades away, as it will in about two weeks, that is the end of it. In advanced age, however, the history is entirely different. The period of eruption forms a comparatively insignificant feature of the disease. After the eruption is gone, the neuralgia of herpes zoster asserts itself, and the patient may suffer for weeks or months from the most excruciating pain, when all signs of

eruption are gone. I have seen patients suffering from extremely painful neuralgia when all traces of the herpes zoster had gone for months. When we know that a patient has had herpes zoster we have no difficulty in assigning the neuralgia to the true cause; but when he comes to you having forgotten the nature of the trouble with which he was afflicted, we may be led astray and may not recognize the secondary character of the pain. This is another point which can be cleared up by careful examination into its history.

Now as to the diagnosis from troubles that are not sciatic in the strictest sense of the term; for example, the pain of ordinary neuritis. In ordinary neuritis the difficulty can soon be cleared up by modifications of sensibility, the atrophy and wasting of the muscles, and the general paresis and paralysis that are developed. It is a fact that in most cases called true sciatica certain modifications of sensibility show that there is undoubtedly a limited modification of the nerve-tract itself. Our patient here, for example, who shows decided anæsthesia upon the fibular side of his leg would not show it unless there had been some modifications of the nerve-fibre, and this is probably due to certain inflammatory changes involving the sheath of the nerve. In ordinary neuritis, where there is a recognized inflammatory condition, the pain which the patient has at first soon becomes distinguished by profound modifications of nutrition. Then, again, take locomotor ataxia. The patient complains of lightning-like pains in the lower extremities. This may be distinguished in a number of ways. First of all, it is usually bilateral, and the patient shows the concomitant symptoms of locomotor ataxia, with muscular incoördination, absent patellar reflexes, etc.

There is usually not much difficulty in making the diagnosis of sciatica from muscular rheumatism. It would generally be made from the fact that in muscular rheumatism there is muscular soreness. There are no sharply-limited painful points present, and the patient, usually, does not suffer when at rest as he does in sciatica. In ordinary rheumatism the trouble affects the joints rather than the course of the nerve. For example, here is another patient who complains of pain very similar to that of our first two patients. But it is on both sides, and especially about his heels and ankle-joints. He also complains of the knee-joint and back. It is a pain that is exaggerated upon movement, and is associated with redness and inflammation. In chronic rheumatism of the joints, therefore, we do not have much trouble in making our diagnosis.

The most important part for our consideration is the treatment of

these conditions. In many cases, rheumatism especially, the ordinary agents that are employed answer very well. Salicylic acid, the salicylates, etc., often cure rheumatic sciatica very speedily. Indeed, we are very often able to make our diagnosis of rheumatic sciatica by such treatment. Where we wish to treat a case of sciatica it is, of course, important for us to use our remedy cautiously, giving twenty-grain doses of salicylic acid every second hour as long as our patient can take it. By giving the acid in an insoluble form you avoid irritation of the stomach, for the reason that it is probably not dissolved until it is carried past the stomach into the intestines.

Another class of remedies, belonging to the aromatic series of carbon compounds, are antipyrin, antifebrin, phenacetin, etc. These remedies often exert a most decided influence in the direction of cure. This is attributable not only to their influence over rheumatism, but also to their marvellous influence over neuralgic pains. In some cases of sciatica very satisfactory results can be obtained by the proper administration of, say, twenty grains of antipyrin every third or fourth hour. Most cases, however, will resist this treatment.

Certain cases seem to do well under alkaline treatment. As a rule, however, I think you will be disappointed. Iodide of potassium is a remedy which enjoys a good reputation, but its use must be long continued. Where anæmia is present, appropriate tonic remedies are always indicated, such as iron, cod-liver oil, etc. We may go through the whole series without avail, and be compelled to resort to local treatment. Among the best is the ordinary cantharidal plaster. Very good results are often obtained by the application of such a blister to the seat of pain. If your patient complains of the most pain over the sacro-iliac synarthrosis, a series of blisters placed over that point often gives great relief. Or you can place a long blister, eight or ten inches by two or three, along the course of the sciatic nerve and repeat it at brief intervals. Keep up the irritation for a week, ten days, or two weeks. This is often followed by a very rapid amelioration. A very effective method is by hypodermic injection. In many cases the pain is so intense that nothing short of the strongest anodyne treatment will afford relief. The injection of chloroform or ether into the neighborhood of the nerve very often exerts satisfactory influences. Our second patient experienced no benefit until recently, though we had given him everything. Recently we have been injecting fifteen minims of sulphuric ether every other day along the course of the sciatic nerve. I have seen very satisfactory results from this. There may be a slight swelling for a day or two about the spot punctured, but

subcutaneous abscesses, as a rule, do not occur. It should not be forgotten that disastrous sloughing has been known to follow the hypodermic administration of these agents.

A procedure known as nerve-stretching has been resorted to. The scientific way in which to stretch a nerve is to cut down upon it, pass a hook around it, and give it a good pull. This nearly always gives relief, but does not always cure. Another way is to place the patient upon his back and flex the limb strongly until it touches his head. This is very painful, and may sometimes have to be done under the influence of an anæsthetic. In ordinary cases, by attention to the general health, by giving alteratives, iodides, salicylates, antiperiodics, etc., we can usually succeed after a while in curing our patients, and in many cases we can have the good fortune to cure them in a short time. It is a very common disease, one which you will frequently be called upon to treat, and one during which your patience will be sorely tried. Finally, let me caution you to be very careful in your administration of opiates in this affection. The practice has often proved the introduction to the morphine habit.

ACUTE CROUPOUS PNEUMONIA; RHEUMATISM WITH CARDIAC SEQUELÆ.

CLINICAL LECTURE DELIVERED AT THE BUFFALO GENERAL HOSPITAL.

BY CHARLES CARY, M.D.,

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Gentlemen,—I present to you this morning a case of lobar, croupous, or acute pneumonia. This man entered the hospital day before yesterday with the same countenance which he presents to-day, and which is quite typical of the disease. There is intense coloring of the lips and a good deal of flushing of the cheeks, but it is not a healthy color; it borders a little on the mahogany. His breathing, you will notice, is exceedingly rapid, entirely out of keeping with the rate of his pulse, which is at present not far from eighty. He says his breathing is not painful. He is restless, and his manner is that of one in delirium. He has just expressed the desire to be suspended from this gas-fixture rather than to lie on the table, and he is constantly chatting in a way that while delirious is not entirely devoid of reason. Here is a collection of muco-purulent expectoration with a rusty color, due to staining with blood, and, as I pour it from the cup into the basin, you notice its remarkable tenacity. This sputum (about fifty cubic centimetres) has been raised since last night. Generally the sputum is more scanty than this, and you can invert the basin without its falling out.

On raising the patient into a sitting posture, which he says is more comfortable than the recumbent, and percussing over the back, you notice that there is much less resonance on the left side than on the right, although the right is not entirely normal. Notice the man's robust build and apparent vigor. His hands show that he has recently been working. I want you to observe the size of his chest and to mark the kind of man that can be affected with this disease.

The duration of the disease will be so short that after to-day not many of the characteristic signs will be demonstrable. The meagre