REPORT OF A CASE OF SPINAL ARTHROPATHY,
IN WHICH MANY OF THE SYMPTOMS OF
SERIOUS LESION OF THE CORD ARE AB-
SENT.

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THIS case, lately under my care at the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases, is of special interest, not only because spinal arthropathies are rare and our opportunity of observing them few, but because many of the more common symptoms of serious lesion of the spinal cord are absent.

The patient came to the hospital with the request that the knee joint be opened, the fluid which it contained evacuated, and asked that we operate at once.

Of the many physicians consulted by him, all pronounced the condition chronic synovitis of the joint, and advised operation interference as the only means of relief.

Albert D. F., age 41, married and paper-hanger by trade, was first seen by me on August 15, 1893.

His family history is excellent.

He had the ordinary diseases of childhood, from which he recovered without incident.

When twenty-four years of age, he had inflammation of the lungs and later on, in the same year, an attack of erysipelas. In 1876, he suffered from an attack of inflammatory rheumatism.

All of the larger joints were implicated and he was confined to his bed for six weeks, but ultimately made a complete recovery. It is from this we must date the commencement of his present disability.

The following winter, or just sixteen years ago, he began to have pains in his limbs which he attributed to

¹ Read before the Philadelphia Neurological Society, Oct. 23, 1893.

"sciatica." These pains were similar in character to those from which he now suffers and have continued at intervals ever since. He states that no two attacks are alike in location, at one time the pain is in the toe or heel, at another in the calf of the leg, but most often in the anterior muscles of the thigh.

If he grasps the part suddenly at or above the seat of the pain, it will disappear in a few seconds. It will often re-appear in a few moments, but will invariably cease if the part is again grasped firmly with the hand.

These attacks of pain have continued with gradually increasing severity, until now they are well marked "lightening pains," and are always worse at night. There have been two attacks of localized œdema of the right leg, extending from the ankle to above the knee. The first five years, and the second two years ago. In each instance the swelling disappeared in a week's time, leaving the limb apparently in a normal condition.

The circulation in both limbs has been poor for the past five years, the feet and legs being cold both summer and winter.

He has always been of a nervous disposition and easily excited. He denies all venereal disease, and there is no evidence whatever to lead us to doubt his truthfulness.

He is a steady smoker of tobacco, but consumes only about four cigars a day. He smokes very slowly and these last him a much longer time than the average smoker. He uses a small amount of alcohol, but is not a drinking man.

In 1881, he had a small sore spot on the base of the right great toe caused by a nail in the sole of the shoe. This ulcer would not heal, and after it had troubled him for three months he consulted a physician who cauterized it with nitrate of silver. The ulcer then healed, but he states it had not been closed more than twenty-four hours when it became very painful. He then opened the wound with a knife and let out a quantity of fluid.

This state of affairs continued for about three years and gave him so much annoyance the toe was amputated at the metatarso-phalangeal articulation.

The stump healed readily without further trouble.

His present condition began eighteen weeks before his admission into the hospital. He had been working hard for eight hours in a damp place and in a cramped position which brought great strain upon the right knee

joints. He states that during that day the knee felt heavy but gave him no pain, and had not pained him before this. At the close of the day he walked two miles to his home in a heavy rain storm and was wet through to the skin..

During this walk the knee began to pain and rapidly increased in severity until he thought he would never be able to reach home. The next morning the knee joint was much swollen, but gave him very little pain. From that day until now the joint has remained swollen and

enlarged, but has given him no pain whatever. The only sensation being one of weakness.

During the first twelve weeks, the relaxation of the joint increased, especially the ligaments on the outer side, producing a condition of outward bowing, but since this time the inner ligaments have given way and the joint is now markedly knock-kneed. Examination of the knee showed it to be much enlarged, the joint full of fluid which floats the patella.

The lateral ligaments are greatly relaxed and permit

of a range of outward and inward movement of nine inches. The knee is so relaxed that he cannot stand upon the leg and can only take a step with the aid of crutches. There is erosion of the head of the tibia and a separation of the epiphysis. There is marked crepitation when the bones are brought in contact, but there is no pain whatever.

There is a difference in circumference of the two knee joints of three and one-fourth inches.

His eyes were carefully examined by Dr. Thomson, and again three months later by Dr. de Schweinitz and Dr. Thomson, who made the following report:

"There is no ptosis, no strabismus and no myosis. The pupils are unequal and show the Argyll-Robinson sign, the dilated form, reacting readily to accommodation but not to light. The media is clear, the fundus is normal in O.D., and shows slight choroiditis in O.S. Both discs show the early stage of grey degeneration.

"Form fields are normal; the red and green fields contracted, the green proportionally more than the red. There has been no apparent change within three months, since the first examination."

All the other special senses are normal.

The station is good. There is no inco-ordination and no loss of power.

K. I., M. I. and E. I. normal.

Dynamometer, right 150, left 140; he is right handed.

Sensation appears to be normal, or possibly there is some retardation to pain and temperature sense in lower extremities, but this is not marked.

No loss of control over bladder or rectum.

The heart and lungs are healthy and the liver and splenic dulness normal.

Digestion is well performed.

He is of spare build, but states he has lost weight during the past eighteen weeks.

He states he has never noticed any change in his sexual appetite or power, neither an increase or diminution.

I believe conservative methods of treatment in these arthropathies of spinal origin should always be preferred.

A number of cases have been operated upon by different surgeons, and attempts at resection of the joint have nearly always resulted in failure.

The trophic changes which permit of the destruction of the articulation act also in preventing union of the wound surfaces.

Some years ago it was my misfortune to have under my care a slight wound of the sole of the foot in an ataxic. The wound itself was slight and simply through the skin, but my patient nearly lost his life, and recovered only after many weeks of great suffering.

Here the destruction of the joint is so great, the separation of the epiphysis of the tibia, the enormous enlargement of the serous surfaces and the dislocation backward of the tibia upon the femur so marked that I do not think it would be possible, disregarding the trophic cause, to expect anything other than failure.

An amputation in the upper one-third of the thigh might possibly result in union of the stump, but this I doubt.

He was kept in bed for some time at complete rest; and with the rest the swelling of the knee diminished somewhat. He was suspended daily an increasing number of minutes with the happiest results in relieving the pains. Potassium iodide was given internally for a time.

In the hopes of relieving pressure and jar to the knee as well as support to the relaxed joint, I had made for him a brace. This brace consisted of two stout bars of steel extending from the upper portion of the thighs to the sole of the foot, with joints at the ankle and knee, with several semi-circular bands of steel for strength. This was attached to a shoe by the ordinary stirrup.

At the knee is a lock to keep the leg extended and yet permit of bending the knee when he is sitting down.

The portion which surrounds the thigh is made to resemble somewhat the socket in an artificial leg for a thigh amputation. This completely encircles the thigh, is strapped tightly to it, and thus relieves pressure upon the knee joint by supporting the weight of the trunk.

A broad band of webbing is strapped over the swollen joint to give it fixation and pressure. The accompany-

ing photograph gives a much better idea of this apparatus than my description of it.

Of course, no claim is made that this will in any way cure the condition, but it has been of the greatest service to him.

When he first came to the hospital, he was totally disabled, and could stand only with the aid of crutches.

Now, for nearly three months, he has been able to walk around with comfort and without the aid of a cane. He tells me he has been at work, has papered quite a number of houses, and although the stiff knee makes it awkward for him at times he has no pain.

Of course, he cannot walk as far or for as long a time as before the knee joint was affected, but he is able to stand and walk with ease and comparatively little discomfort.

For the very careful notes of this case, I am indebted to Dr. Walker, the resident surgeon at the hospital, and for the photographs to Dr. Boyce, also of the house staff.

These latter show most accurately the appearance of the enormously enlarged knee joints with the relaxation of the ligaments and the brace when applied to the limb.

An Addition to the Etiology of Degenerative Changes in the Cord.—Dr. Fr. Tuzek, in the *Prager Medicinische Wochenschrift*, gives an interesting account of some recent investigations of his, to determine the personal relation between ergotism and dementia paralytica. One fact brought to notice was the association of pellagra in patients who were suffering from nervous symptoms induced by ergot. Histological examination of the nervous system in cases where death had ensued, with pellagra present, revealed marked degenerative changes in the spinal cord, especially in the posterior and lateral columns. The author believed that his studies were sufficiently confirmative to make the statement that the poison from the deceased grain acted in such a manner upon the nervous system, as to produce degenerative changes in the spinal cord, and that an important addition was thereby made to the etiology of cord disease.

B. M.