In very late cases where suppuration is present, the operation is barred by the danger of sepsis.

The patient by drawing up the sound limb demonstrates the degree of flexion.

CONCLUSIONS.

The following is a summary of my views :

1. That no treatment better than rest, combined with constitutional remedies, is known for tuberculous disease of hip.
2. That a large proportion of cases of this disease, especially those in which flexion has occurred, go on to suppuration, and that one of the chief causes of their doing so is the difficulty of giving the joint rest.
3. That much of this difficulty lies in the fact that the position of greatest ease for the tuberculous hip-joint is one in which it is very awkward for the patient to carry the limb, very difficult for the surgeon to fix it, and therefore one in which the joint is constantly exposed to disturbance.
4. That it is possible, and in many cases advisable, to remove this difficulty by such an osteotomy of the femur as will allow the limb to be put straight, while the upper of the fragments retains "the natural position of rest."
5. That the operation also does good in some cases by relieving tension in the bone.
6. That an osteotomy of the femur when done in this respect is not as formidable an undertaking as it is under ordinary circumstances, for it is not the division of the bone that is formidable in this operation, but the constrained position in splints and the long period of rest required for union. Now since these latter incidents are a great gain for the tuberculous joint, they must be put to the credit of the operation, thus leaving very little to be entered on the debit side.

SPONTANEOUS FRACTURE OF RIGHT TIBIA AND FIBULA IN A CASE OF LOCOMOTOR ATAXIA.*

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SINCE Weir Mitchell¹ in 1873 and Charcot² in 1874 pointed out that spontaneous fracture is liable to occur in the course of locomotor ataxia, many cases have been observed and recorded, especially in France. But in our own country it would appear that such a complication in this disease is either very rare or it escapes notice when it occurs, for there are but few references to such a condition, and I have failed to discover reports in our periodicals, though accounts of many instances of the joint-lesion, arthropathy, are to be found here and there. Mr. Lunn,³ it is true, mentions incidentally in an account of a case of fragilitas ossium, which

he showed before the Clinical Society of London, that he had met with three cases of spontaneous fracture in locomotor ataxia; and Dr. Byrom Bramwell⁴ mentions a case of spontaneous fracture of the femur, which he saw at Newcastle. In the latter there was absence of pain on movement to detect crepitus, but there was so much swelling of the thigh that the case was at first regarded as one of sarcoma of the bone complicated with fracture.

Although spontaneous fracture of bones may be rare in tabes dorsalis in this country, yet we do not infrequently meet with it under other conditions; for example, in subacute osteomyelitis, in quiet necrosis of the shaft of a long bone, in primary central sarcoma, in secondary carcinoma, and occasionally in the condition—which is still in nature quite obscure—called fragilitas ossium, in osteomalacia, and in some of the diseases of the insane, especially general paralysis.

My excuse for bringing this case before your notice is, therefore, the absence of any reports in our own journals and the desire to elicit information as to whether tabetic patients in this country are as liable to this complication as are those in France, where locomotor ataxia has been especially studied.

The notes of the case are as follows: R. R., aged 46, tailor, admitted into Addenbrooke's Hospital under my care February 19th, 1896. Sallow, tall, thin, and narrow chested. Pulse 108, strong; breathing natural; tongue slightly furred; appetite good, but suffers from recurring attacks of dyspepsia; urine is natural, micturition usually normal, but at times the urine dribbles away. Both bones of right leg were broken near the middle a few hours before admission into the hospital, the fractured ends of the tibia being easily felt, and but little, if any, pain complained of when the parts were manipulated. The leg was much swollen, especially at the seat of fracture, owing to extravasation of blood. The fracture occurred while turning round to enter his house after feeding fowls in the garden, the right leg suddenly giving way under him. He at once caught a support, and thus saved himself from falling to the ground. Three weeks previously he had felt a "crick" in the calf of the same leg when running upstairs, after which his leg felt weak and "as if he ought to be careful how he trod on it."

On further examination it was found that his patellar and plantar reflexes were absent, the cremasteric and abdominal reflexes very slight, if present; pupils contracted; each reacted to light, though only to a slight degree, the movements for accommodation being normal; colour vision was normal; field of vision was not contracted, and he says he can thread a needle as well as ever. Over both legs, especially in front, sensation was imperfect and distinctly delayed; this change was pronounced in patches only. Over the remainder of the body sensation appeared normal. Grip of hands was good. There was distinct inco-ordination of movements of the left lower limb.

He says that for the last six or seven years he has suffered from a staggering gait, but that he can feel perfectly well with his feet, and can recognise what he is treading upon. For the last twenty years he has suffered more or less from lightning pains, which at times increase in severity and culminate in an attack of gastric crisis. These attacks come on after periods varying from two to three months. He has suffered from "dribbling of urine" at times. Father, 76 years of age, is alive and well. Mother, 78 years of age, is also alive and well. Two brothers and three sisters all well.

The day following his admission into the hospital there was great effusion of blood into the tissues around the seat of the fracture; and, owing to the size and persistence of this swelling for several days, it was deemed advisable to investigate the fracture in order to be quite sure that there was no malignant disease at the bottom of the mischief. Accordingly, on February 15th, 1896, six days after admission, a longitudinal incision was made over the fracture, and the broken ends examined. There was no trace of malignant disease, and all we could discover was the tibia harder and more brittle than natural. The wound was closed and the limb fixed in plaster-of-paris. Afterwards the patient was comfortable, and union in due time became complete.

In the absence of malignant disease the case was pronounced, without doubt, to be one of spontaneous fracture

* Read before a combined meeting of the East Anglian and Cambridgeshire and Huntingdonshire Branches of the British Medical Association.

occurring in the course of locomotor ataxia, from the symptoms of which he was suffering.

The frequency with which spontaneous fracture of bones occur in cases of locomotor ataxia has not, it seems, been calculated, but the relative frequency of such fractures in different bones of the body is given by Durand⁵ as follows. Of 42 instances:

17	occurred in	the femur.
10	"	" tibia and fibula.
6	"	" radius and ulna.
3	"	" clavicle.
2	"	" humerus.

Accordingly the femur is, of all the bones, the most liable to have trophic changes taking place in it, and to become spontaneously fractured in locomotor ataxia. I may here observe that the bones of the lower extremities are affected very nearly three times as often as those of the upper; and, although the fracture takes place in consequence of some diseased change in the bones, yet union, and that often with much callus, seems to occur readily, as indeed it does in osteomalacia, in fragilitas ossium, and even in secondary cancer of bone. The prognosis in such cases, so far as the fractured bone is concerned, is favourable.

With regard to the causes of spontaneous fractures in locomotor ataxia, all are agreed that they arise from localised changes in the bones—"trophic changes"—and that such changes are dependent upon disease of the nervous system. The changes in the bone which precede spontaneous fracture are in the main (1) rarefying osteitis, (2) fatty transformation of the connective tissue cells, and, lastly, great diminution in the earthy salts, especially of the phosphates of the part. These changes are found to occur in patches, and are distributed irregularly, just as are the patches of partial or complete anæsthesia in the skin—a condition, it will be remembered, that formed a special feature of the case under consideration. All I can say with regard to the bone changes in this case is that the tibia seemed harder and more brittle than natural; the minute changes in it I had not an opportunity of examining. Although all writers are pretty well agreed as to the changes that occasionally occur in the bones in locomotor ataxia, and that these are dependent upon disease of the nervous system yet there is a difference of opinion with regard to the seat of the lesion in the nervous system. It will be remembered that in locomotor ataxia the chief nerve lesion is in the spinal cord—a sclerosis of the postero-external columns. Charcot and Joffroy,⁶ in their investigations into the structure of the spinal cord, in a case in which the joints were affected, found that the grey matter in the anterior horn was, in addition to the postero-external columns, affected by sclerosis. In consequence they arrived at the conclusion that the trophic lesions in the bones, as well as in the joints, are due to structural changes in the grey matter of spinal cord. Buzzard,⁷ however, regards it as not improbable that trophic changes, because they occur often in the preataxic stage of the disease, and because they are often associated with visceral lesions, are due to some structural changes in the medulla oblongata. During recent years, however, Pitres and Vaillard⁸ have discovered that changes in the peripheral nerves—peripheral neuritis—are of not uncommon occurrence in some forms of tabes, and they have found that neuritis occurs here and there in the small nerves. Consequently they suggest that the patchy anæsthesia in this disease is due to peripheral neuritis, and maintain that the trophic changes in the bones and in the joints are due to a similar cause. Accordingly, we may say that the most recent researches into the causes of trophic changes in the bones and in the joints in tabes dorsalis point to the conclusion that the peripheral nerves play a very, if not an all-important part in their production. Until further information is obtained regarding the dominating seat of trophic influence no definite explanation of the nervous mechanism of trophic functions can be given.

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FILARIASIS; LYMPH SCROTUM AND VARICOSE GROIN GLANDS:

POST-MORTEM EXAMINATION.

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I AM indebted to Dr. Manson, to Dr. Abercrombie, and to Mr. Johnson Smith for their permission to publish these notes. A report of the case during the patient's stay in the Seamen's Hospital, Greenwich, will be found in the *Transactions of the Pathological Society* for 1896.

A. W., aged 21 years, was admitted into Charing Cross Hospital on September 8th, 1896, suffering from lymph scrotum with a superadded attack of lymphangitis of the right groin.

Past Personal History.—The patient was born in Kingstown, Jamaica, in 1876, both father and mother being English. The first eleven years of his life were spent in different parts of the West Indies. He then became a sailor, and journeyed between the West Indies, United States of America, and China. He stated that he was perfectly well until the beginning of 1890. In that year he first noticed a rounded swelling in the epigastric and hypochondriac regions, extending from the xiphi-sternum to the umbilicus, and laterally for about 3 inches on either side of the mid-line; this appears not to have been tender and to have had no inflammatory signs. This swelling appeared during the night, and diminished very rapidly when he assumed the erect posture; accompanying it was considerable pain of an aching character in the right side of the abdomen, and extending round into the back. The pain, however, did not prevent him from following his occupation. This condition lasted for some three weeks.

Eight months later, after a hard day's work, acute pain suddenly developed in the right groin, with much swelling in that region and in the right side of the scrotum; it compelled him to remain in bed for a fortnight. The acute symptoms of the lymphangitis then subsided, but the local swelling continued to increase, and from thence onwards recurrent attacks of inflammation in those parts were of frequent occurrence. About a year later the left groin was affected in an exactly similar manner.

During one more than usually severe attack, a dilated lymphatic in the right inguinal region burst, and left a fistulous opening, which discharged for some time a thin, creamy, yellowish-white matter.

A remarkable fact with regard to the occurrence of lymphangitis was the periodicity with which the attacks came on. The patient affirmed that they appeared, with more or less regularity, every three months from the first onset of symptoms until his admission, six years later.

In May, 1896, he was taken into the Seamen's Hospital, Greenwich. The accompanying photograph, for which I am

indebted to Mr. Johnson Smith, well shows his condition at that time. The large pendulous scrotum, and the painful tension in the distended groin glands, caused so much discomfort that they quite unfitted him for work. An operation was therefore deemed advisable. In May Mr. Johnson Smith removed the whole of the scrotal tissues and the lymphatic glands in the right groin, and in the following month he performed a like operation on the left side.

After the first operation I was told by the patient that he passed on one occasion a large quantity of milky urine, and, as an attack of chyluria is, I believe, not uncommon after