HANSEN'S DISEASE WITH BILATERAL TARSAL DISORGANISATION

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A 37-year -old male patient with Hansen's disease midborderline spectrum, presented with bilateral pedal edema. X-ray examination of the feet showed disorganisation and disintegration of the tarsal bones. Bilateral tarsal disorganisation which can develop in Hansen's disease is usually not recognised by the clinician.

Key words : Hansen's disease, Leprosy, Tarsal disintegration

Introduction

Hansen's disease is a disorder primarily affecting the nerves and secondarily other organs including the bones. The bone involvement may be primary or secondary. Even though tarsal bone lesions are seen in 25% of leprosy patients, tarsal bone disorganisation is relatively rare.[1] Disorganisation of the tarsal bones is characterised by fragmentation and collapse of the bones thereby enhancing the disability and deformity of leprosy patients.

Case Report

A 37-year-old male patient with Hansen's disease midborderline on MDT presented with bilateral edema of both feet of 2 months duration. Two months ago he had sustained a sprain on the left foot which was followed by edema of the foot. He was consequently given a below knee POP cast. On removal of the plaster after two months there was no improvement, but worsening of the pain and edema. Subsequently he also developed pain and edema of the right foot. He has been on regular MDT for leprosy since one year. He also had developed a type 1 lepra reaction and was on steroid therapy.

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Examination revealed bilateral tender diffuse edema of both feet with local rise of temperature (Fig.1). There was flattening of arches of both feet with varus

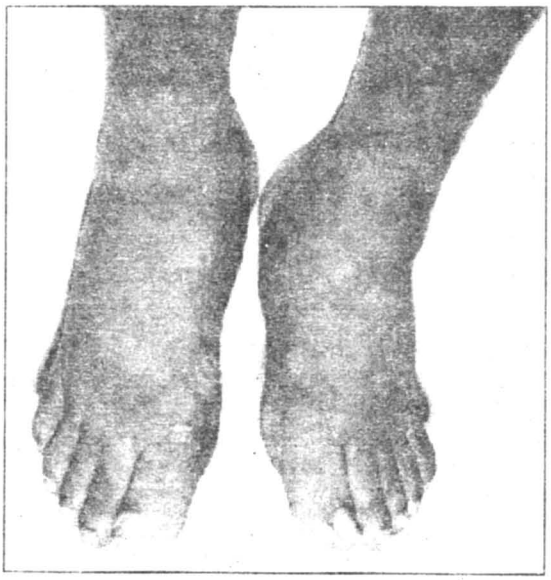

Fig. 1. Bilateral diffuse edema.

deformity of the left foot (Fig.2). There was no crepitus but movements of both feet were restricted. The patient also had multiple discrete ill-defined anaesthetic patches

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of varying sizes and shapes distributed on the upper and lower limbs. Right and left ulnar neves and right radial cutaneous nerve were thickened but nontender. The systems were within normal limits.

Laboratory investigations of blood and urine were within normal limits. Liver and renal function tests were also normal. The ear lobe smear and slit-skin smear for AFB were negative. Skin biopsy was consistent with midborderline leprosy. X-ray of both feet showed gross disorganisation, destruction and dislocation of the tarsal

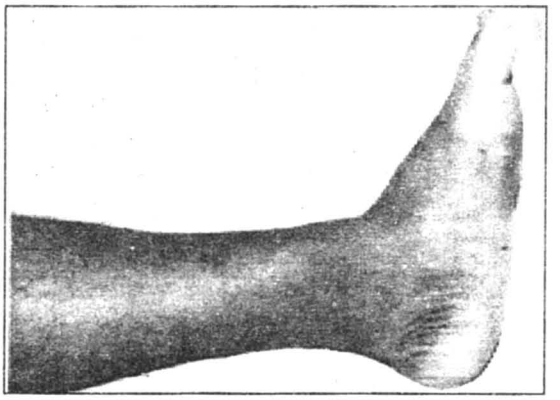

Fig. 2. Flattening of the arches

bones, intertarsal joints and tarsometatarsal joints (Fig.3). The bone changes were more severe on the left foot. The presentation with the clinical features of bilateral edema of the feet with flattening of the arches and classical

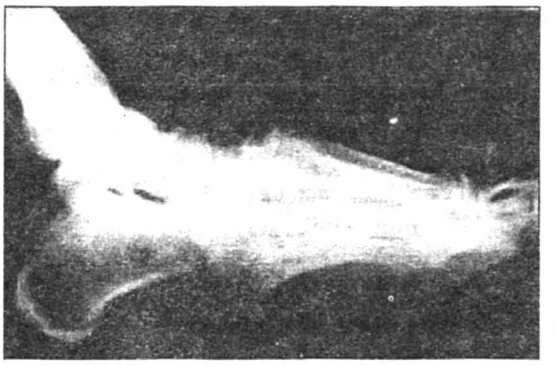

Fig.3. Disorganisation of tarsal bones

X-ray findings enabled us to make a diagnosis of Hansen's disease with bilateral weight relieving calipers with the help of the Orthopaedics and Physical Medicine departments. Antileprosy therapy was continued.

Discussion

Tarsal bones are one of the commonest bones to be affected in the neuropathic feet of leprosy. This is due to the shearing forces and stress acting on these bones on an anaesthetic foot during walking as in the case of a leprosy patient. The factors contributing to the pathogenesis of tarsal disorganisation (TD) include, inactivity of the feet, immobilisation, sepsis and osteomyelitis, use of corticosteroids and recent lepra reaction.[1-3] Our patient had a recent episode of shearing stress for which he was given a POP cast which was probably not in the position of function. He also had a recent episode of type 1 reaction which was treated with steroids.

Once TD has occurred and the patient continues to use that foot there is progressive destruction of the bones ultimately leading to disability and deformity. Thus it is imperative that TD should be recognised as early as possible by the clinician and adequate management given. Moreover the presentation with pedal edema may mislead the clinician to diagnose it as a part of lepra reaction or downgrading disease process. Thus an X-ray is mandatory in such situations. The mainstay in the management of TD is immobilisation in the functional position for a particular period to allow for healing of bone.[1] This is achieved by using below knee POP walking cast and in some cases weight relieving calipers.[1] We are reporting this case so that the clinician may recognise this entity of TD as early as possible and start prompt treatment thereby preventing further damage to the feet in leprosy, a disease which has a notorious reputation as a crippler but not a killer.

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