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Case Report

Tubercular osteomyelitis of calcaneum bone: A rare occurrence

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ABSTRACT

In spite of the endemic nature of tuberculosis in India, skeletal tuberculosis is relatively infrequent. Involvement of foot bones is uncommon and isolated calcaneum is even rarer. Osteoarticular tuberculosis is a diagnostic enigma, as the characteristic signs and symptoms of this disease may be absent, or mimic other disorders, leading to emergence of complications and therapeutic delay, particularly when the disease affects unusual sites. Here, we are reporting the case of 20-year-old male, who presented with a rare localization of tubercular osteomyelitis involving the calcaneum without adjacent joint involvement to draw attention to this exceptional location in adults, managed with anti-tubercular treatment and gained excellent recovery.

1. Introduction

Despite many advances in diagnosis and management of tuberculosis (TB), it still remains a major infectious disease worldwide. While pulmonary tuberculosis is the most common presentation, extra-pulmonary tuberculosis is also an important clinical problem. It can involve virtually any organ system in the body with osteoarticular involvement ranging from 1 to 3%.[1] Most common site for bone tuberculosis is spine followed by weight bearing major joints like hip and knee joint, and involvement of foot bones is even rare, where it involves calcaneum, talus, 1st metatarsal, and navicular bones in order of decreasing frequency.[2] Isolated calcaneum bone tuberculosis is very rare and only few cases have been reported even from countries like India where tuberculosis is rampant.[3] The calcaneal localization without adjacent joint involvement like in our case is extremely rare, and diagnosis is often missed till late stage of the disease.[4] Foot bone tuberculosis including calcaneum TB may become significantly debilitating if diagnosed late and left untreated. Early diagnosis can omit the need of surgical intervention.[4,5] Here, we are discussing a case of calcaneum bone tuberculosis, diagnosed early and treated with anti-tubercular drugs without any untoward sequel.

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2. Case history

A 20-year-old male patient presented to orthopedics department with complaints of swelling over the lateral aspect of right ankle joint, pain and difficulty in walking for 2 months, fever on and off for 1 month, and lethargy of 20 days duration. His past medical and surgical history was not significant. Physical examinations revealed no abnormality except a swelling over right ankle joint, approximate size of 2 × 2 cm, tender and fixed to underlying structure. Chest skiagram and all routine blood investigations were normal. X-ray anterior-posterior and lateral view of right ankle joint showed an osteolytic lesion in posterior aspect of calcaneum with sclerotic and focal irregular margin, likely osteomyelitis focus (Fig. 1). Magnetic resonance imaging (MRI) of right ankle joint showed rim enhancing area involving medial aspect of right calcaneum with cortical break and adjacent soft tissue extension into right flexor retinaculum, quadratus plantae, and subcutaneous region suggestive of osteomyelitis (Fig. 2). Excisional bone biopsy was done, which on histopathological examination revealed clusters of epitheloid macrophages with Langerhans type of multinucleated giant cells and granuloma, overall finding favoring tubercular pathology (Fig. 3). The culture of the biopsy specimen over Lowenstein–Jensen media for AFB was negative. Clinico-radiological and histopathological examination established the diagnosis of tubercular osteomyelitis. The patient received four drug anti-tubercular

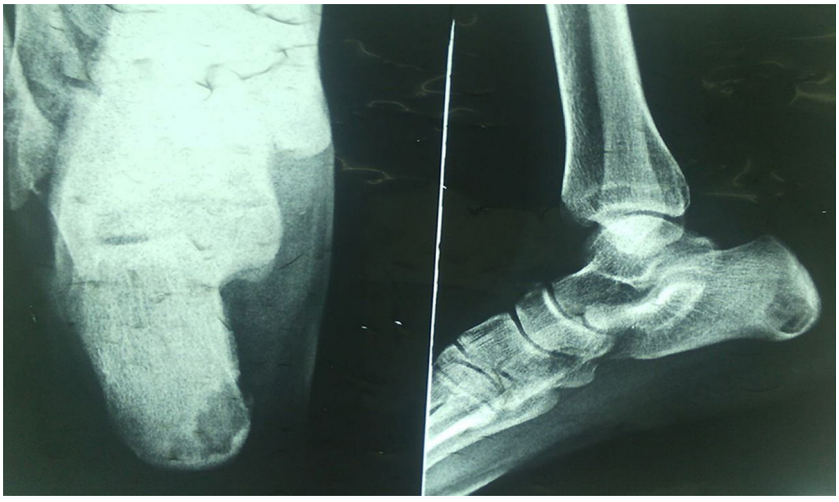

Fig. 1 – X-ray, AP & lateral view of right ankle joint showing an osteolytic lesion in posterior aspect of calcaneum with sclerotic and focal irregular margin.

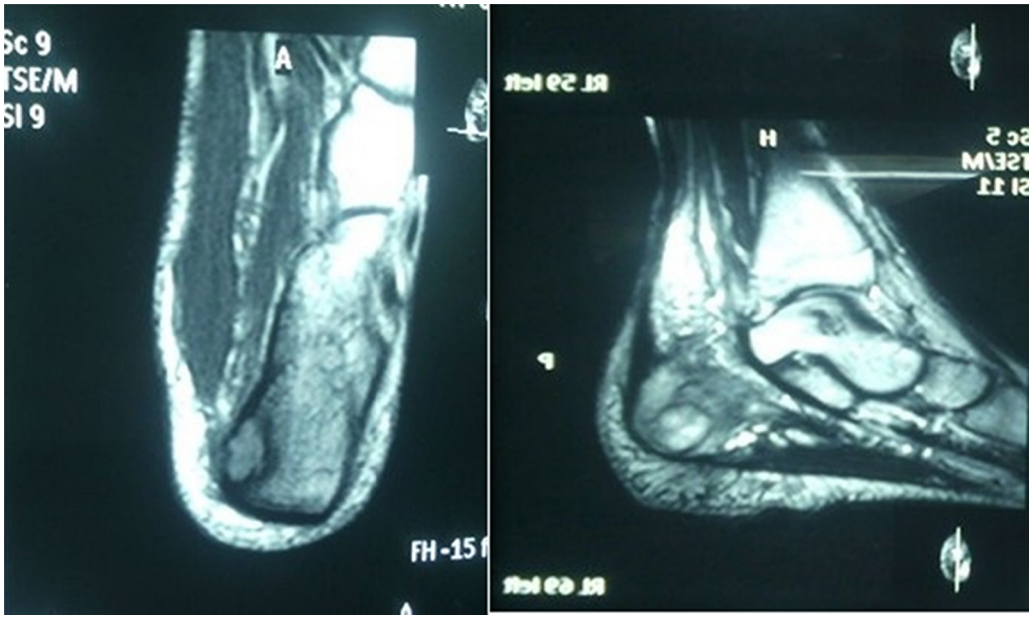

Fig. 2 – Magnetic resonance imaging (MRI) of right ankle joint showing rim enhancing area involving right calcaneum medial aspect with cortical break and adjacent soft tissue extension into right flexor retinaculum, quadratus plantae, and subcutaneous region suggestive of osteomyelitis.

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