



REVIEW ARTICLE

CASE REPORT - OSTEOARTICULAR TUBERCULOSIS OF THE LATERAL CUNEIFORM IN A CHILD

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ABSTRACT

This case report presents a rare instance of osteoarticular tuberculosis involving the lateral cuneiform bone in a 9-year-old female patient. The patient presented with pain and swelling in the left foot for two months, difficulty in walking for one month. The X-ray findings of the left foot, showed single osteolytic lesion of the lateral cuneiform bone with associated soft tissue swelling, is highly indicative of osteoarticular tuberculosis. MRI findings revealed an intraosseous abscess involving lateral cuneiform bone, muscle edema and tenosynovitis along FHL muscle, likely in favour of infective etiology. The diagnosis was confirmed through biopsy and the patient responded well to anti-tuberculosis therapy. This report highlights the importance of considering tuberculosis in atypical skeletal locations, especially in endemic regions (India).

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INTRODUCTION

Bone tuberculosis is a significant form of extrapulmonary tuberculosis, often presenting diagnostic challenges due to its nonspecific symptoms and variable imaging features. This case underscores the need for awareness and early diagnosis of tuberculosis in unusual skeletal sites.

Case Presentation

Patient Information

Name: Hansika Mehra
Age/Gender: 9 years/Female
Hospital: Gandhi Medical College and Hamidia Hospital,
Bhopal, Madhya Pradesh, India
Patient ID: 12256147

Medical History

Past Medical History: No significant medical or surgical history.

Family History: Not relevant.

Clinical Presentation: Symptoms: Pain and swelling in the left foot for two months, along with difficulty in walking for the past one month. Pain was insidious in onset, dull aching in nature, gradually progressive and was associated with swelling in the left foot, and was not relieved by any medication.

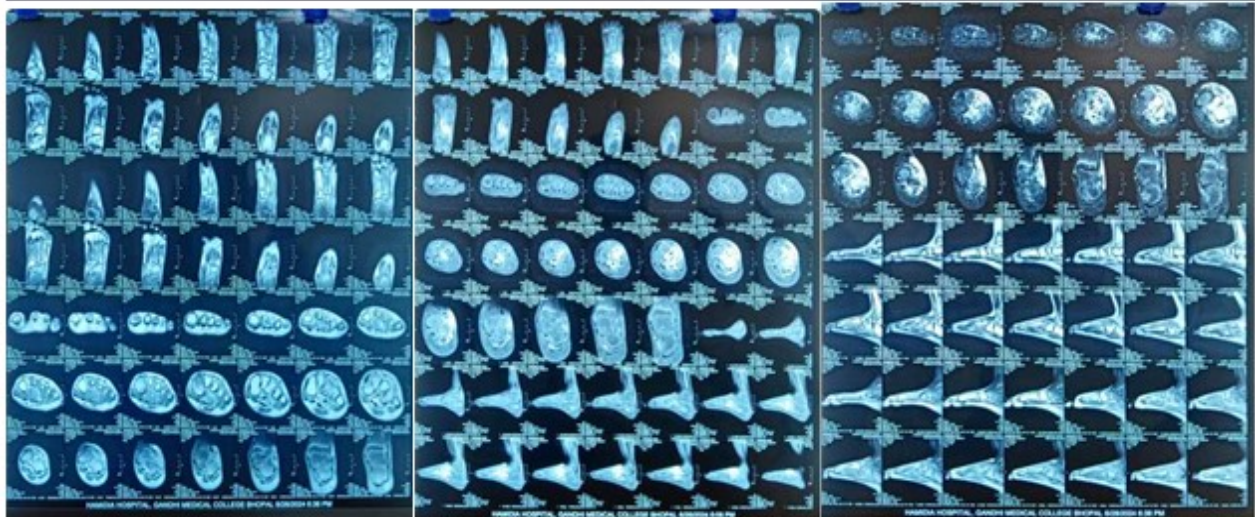
Differential Diagnosis: Osteoarticular Tuberculosis, Chronic Osteomyelitis, Osteoid Osteoma, Brodie's Abscess, LCH

Diagnostic Assessment

Imaging Findings

Xray: The X-ray findings of the left foot, showing single osteolytic lesion and cortical destruction of the lateral cuneiform bone with associated soft tissue swelling, are highly indicative of osteoarticular tuberculosis in this atypical skeletal location.

MRI: MRI of the left foot with contrast suggestive of Altered marrow signal with T2/STIR hyperintensities showing peripheral post-contrast enhancement in the lateral cuneiform bone measuring approximately 12.4 x 9 mm, with adjacent marrow edema likely intraosseous abscess in the lateral cuneiform bone.



Abnormal hyperintense collection along the intermuscular plane of the sole region, extending to the subcutaneous plane with cellulitis. Tenosynovitis along the flexor hallucis longus muscle. Mild fluid in the intertarsal joint space. All findings suggest an infective etiology, likely tuberculosis.

Laboratory and Biopsy Findings

Biopsy and Curettage: Conducted on 28/06/2024. **Histopathological Examination Findings:** Caseous Granulomatous lesions confirmed the diagnosis of osteoarticular tuberculosis.

Treatment

Medical Treatment: Anti-tuberculosis therapy initiated as per standard protocol.

Surgical Intervention: Biopsy and curettage of the left lateral cuneiform bone.

Supportive Treatment: Analgesics, antibiotics, and symptomatic support. Physiotherapy for foot function.

Follow-Up and Outcomes

Hospitalization Period: 19-Jun-2024 to 01-Jul-2024.

Outcome: Significant improvement in symptoms at the time of discharge.

Medications at Discharge: Cefuroxime, Diclofenac, Pantoprazole, multivitamins, calcium, Vitamin D3

Visual Evidence: Following are the clinical images, Xray and MRI films of the patient

DISCUSSION

This case illustrates the diagnostic challenges and clinical management of osteoarticular tuberculosis in a rare location. The presentation in a child with no significant medical history emphasizes the need for high clinical suspicion in endemic regions. The role of MRI in identifying characteristic features and guiding biopsy for confirmation is highlighted.

CONCLUSION

Early diagnosis and appropriate management of bone tuberculosis are crucial for favourable outcomes. This case reinforces the importance of considering tuberculosis in differential diagnoses of chronic bone infections in endemic areas.

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