



Skeletal Tuberculosis Mimicking Plasma Cell Dyscrasias: a Rare Case Report

KEYWORDS

Skeletal Tuberculosis, Plasma cell dyscrasias

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ABSTRACT

Tuberculosis is a pandemic and is among top 10 killer infectious diseases, second only to the HIV. It has a worthy reputation as one of the greatest mimicks in medicine with a multitude of clinical pictures and variation. Skeletal Tuberculosis accounts for 1-2% of all TB cases and 10% of all extrapulmonary cases; as such it is not common. We present here a case report of an elderly female with atypical clinical features of Skeletal tuberculosis. The patient presentation, laboratory and radiological findings were highly confusing and a definitive diagnosis was made only after a histopathological examination.

INTRODUCTION:

Skeletal Tuberculosis, an uncommon form of extra pulmonary tuberculosis (TB) accounts for 1-2% of all TB cases and 10% of all extra pulmonary TB [1]

Spinal tuberculosis accounts for 50 percent of skeletal TB cases. Thoracolumbar region is the most common site, followed by cervical and sacral vertebrae. Typically, intervertebral disc space and adjacent vertebral bodies are involved. However occurrence of unifocal atypical skeletal tuberculosis is a rare event and previous literature hasn't reported much of those cases. Cases of intervertebral disc sparing have been reported [2]. Histopathological examination of tissue obtained from the affected site has served as the Gold standard of diagnosis for these cases. Radiological examination modalities like CT, MRI have not been proved as efficacious as histopathological examination.

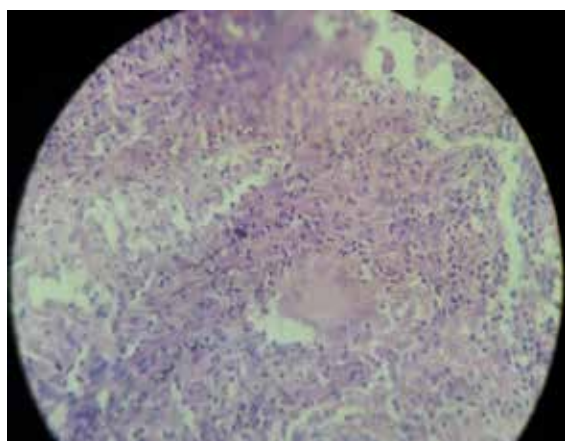


Figure 1: Photomicrograph showing Langhan's type of giant cell (H&E 10 10)

CASE REPORT:

A 60 year old female presented in the Orthopaedics OPD with 6 months history of Chronic low back ache with generalized weakness. There was no associated fever, cough, night sweats etc. Routine blood examination was normal except mild anaemia and an ESR value of 130. PBS study revealed a Microcytic hypochromic picture with increased Rouleaux formation of RBC's. Liver and Renal

function tests were within normal limit. X-Ray Lumbosacral spine revealed a significant part of vertebral body to be lost. Tuberculin test was found to be negative. Hence differential diagnosis of Skeletal TB and Plasma cell dyscrasias were given. Serum electrophoresis showed a broad based gamma region, suggesting a Polyclonal Gammopathy. Bone marrow aspiration study was reported as normocellular marrow with a normoblastic reaction with plasmacytosis of 16%; few atypical plasma cells were present. Finally, Histopathological study of the bony lesion was done. Haematoxylin & Eosin stained sections showed Granulomatous lesions with presence of Langhan's giant cells [Fig 1]. AFB staining of tissue sections showed presence of tubercle bacilli. Hence a definitive diagnosis of Skeletal Tuberculosis was made.

DISCUSSION:

TB of bone may evade diagnosis for a long time as it usually remains silent till either involvement of a neighbouring joint or development of a soft tissue swelling due to cold abscess formation. The osteolytic lesion of TB closely mimicks those due to Multiple Myeloma or Secondary malignant deposits. Multifocal involvement of TB is more common than unifocal involvement. Typical spinal TB usually has specific radiological findings of involvement of adjacent vertebral bodies with destruction of the intervening disc and a paravertebral soft tissue involvement; can be diagnosed easily and treated. [3,4] However the incidence of Atypical Spinal TB is only 2.1% as documented in recent studies [5]. A variety of radiological features of atypical spinal TB can lead to a misdiagnosis and incorrect treatment and in certain cases can increase the risk of other complications such as a neurological deficit. [6,7]. Our case was such kind of an unifocal atypical tuberculosis which created lot of confusion in diagnosis and management. The patient didn't have any of the classical findings of tuberculosis. Blood investigations were not specific for either TB or a plasma cell dyscrasia. Roentgenogram of L-S spine showed a very non specific finding of destructive bony lesions. Bone marrow aspiration smears showed plasmacytosis of 16% which usually indicates a probable plasma cell dyscrasia. The conventional Tuberculin test was negative, Chest roentgenogram didn't show any features of pulmonary TB. Very few cases have been documented with such features and findings. However histopathological examination could give the final diagnosis.

CONCLUSION:

Skeletal TB should be considered in the differential diagnosis of elderly patients who present with chronic backache and generalized weakness as solitary complaint. Some laboratory, radiological and clinical findings may be indistinguishable from a neoplastic disease. A high index of suspicion and proper diagnostic methods may prevent delayed diagnosis and thus early treatment may prevent subsequent complications. A negative tuberculin test doesn't rule out the possibility of tuberculous bone involvement. Also a lack of radiographic and clinical evidence of pulmonary involvement doesn't rule out Skeletal TB.

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