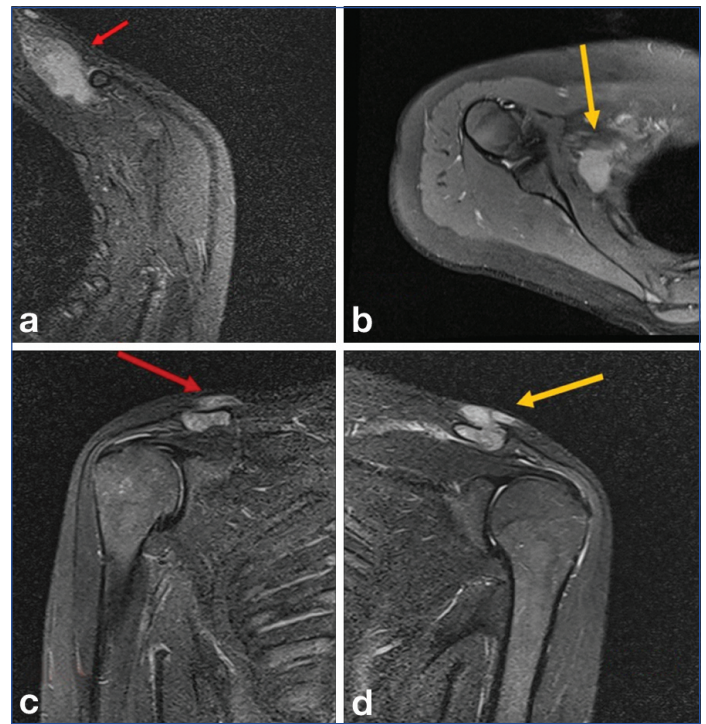


Unusual Presentation of Multifocal Tubercular Osteomyelitis

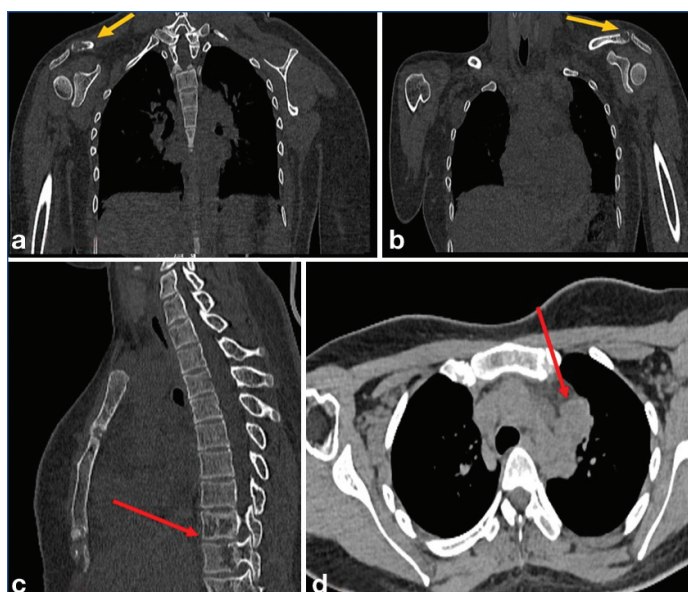
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CASE REPORT

A 21-year-old unmarried female came to our hospital with complaints of swelling in the left supraclavicular region for two months and weight loss of 5 kg over the past two months. She had no history of fever or loss of appetite, and her previous medical history was unremarkable. Upon examination, the patient was afebrile, and her vitals were stable. Local examination revealed a firm swelling measuring 4×4 cm in the left supraclavicular region, which was firm in consistency, with no warmth or tenderness. Blood investigations revealed elevated levels of C-Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR) at 130 mg/L and 51 mm/hr, respectively. Additionally, she had mild anemia with a hemoglobin level of 9.5 g/dL. Further radiological investigations, including a Computed Tomography (CT) scan of the shoulders and chest, revealed symmetrical lytic lesions involving the lateral aspect of both clavicles [Table/Fig-1a,b]. Lytic lesions were also observed in the D9, D10, and D11 vertebrae, with normal intervertebral disc space [Table/Fig-1c]. A CT lung window scan showed normal lung parenchyma but enlarged mediastinal lymph nodes in the prevascular location [Table/Fig-1d]. A plain Magnetic Resonance Imaging (MRI) of the bilateral shoulder joint revealed a hyperintense lesion in the intramuscular plane in the left supraclavicular region, [Table/Fig-2a] along with multiple enlarged lymph nodes in the right axilla [Table/Fig-2b]. The MRI also showed hyperintense lesions involving the lateral aspect of both clavicles, along with an associated soft tissue component. [Table/Fig-2c,d]. Given these findings, a possible diagnosis of tuberculosis with atypical imaging findings was considered. Lymphoma and metastasis were also considered



[Table/Fig-2]: a) MRI STIR coronal image showing hyperintense lesion in the left supraclavicular region (red arrow); b) MRI PDFS axial image showing enlarged node in the right axilla (yellow arrow); c,d) MRI-PDFS coronal image showing hyperintense lesion involving the lateral aspect of bilateral clavicle with abscess formation (red and yellow arrows, respectively).



[Table/Fig-1]: a,b) CT shoulder showing lytic areas in the lateral end of bilateral clavicle (Yellow arrow); c) CT dorsal spine shows lytic areas involving D9, D10 and D11 vertebra (red arrow); d) CT chest axial image showing multiple enlarged nodes in the mediastinum (red arrow).

as differential diagnoses due to the presence of lytic lesions in the vertebrae and enlarged mediastinal and axillary lymph nodes.

Subsequently, a biopsy of the left supraclavicular swelling was attempted, which yielded pus. Therefore, an incision and drainage of the left supraclavicular cold abscess were done. Intraoperatively, caseating necrotic tissue and approximately 200 mL of frank pus were noted. The sample was sent for TB-PCR, which revealed the detection of rifampicin-resistant (intermediate) mycobacterium bacilli at a concentration of 5.0×1000 cfu/mL. The patient was started on an antituberculosis regimen. After three months of therapy initiation, there was an improvement in the patient's general condition, with a significant decrease in pain and swelling size. The patient has gained weight and is now able to perform her normal routine activities without any difficulty.

DISCUSSION

Musculoskeletal tuberculosis is rare, accounting for 1.5% to 3% of tuberculosis infections. About 50% of these cases involve the spine [1]. Multifocal tubercular osteomyelitis is defined as the involvement of two or more non-contiguous skeletal regions, constituting 10-15% of musculoskeletal tuberculosis cases [1]. Skeletal Tuberculosis (TB) cases often pose diagnostic challenges due to their insidious onset, non-specific clinical presentation, and radiographic findings similar to other diseases [2]. Multifocal musculoskeletal TB is rarely

encountered in non-immunocompromised individuals with no prior pulmonary involvement [3]. Clinical and radiological findings may be indistinguishable from malignant disease. The present case is unique because of the various imaging manifestations, like symmetrical clavicle involvement, vertebral involvement, mediastinal and axillary lymph node enlargement, and left supraclavicular swelling, mimicking malignancy. A lack of radiographic and clinical evidence of pulmonary involvement does not rule out skeletal TB [4]. Some risk factors for a poor outcome include disease severity, immunocompromised state, and delay in starting medication [5]. A similar case was reported in the literature in which an elderly woman had long-standing pain and swelling in her right clavicle. On examination, minimal warmth and tenderness were present in the lateral one-third of the clavicle, and the swelling was hard in consistency. X-ray of the clavicle revealed a lytic lesion involving the lateral one-third. MRI showed a hyperintense focus with cortical breach along the superior aspect of the clavicle. Following the biopsy, the culture was positive for tuberculosis, and the diagnosis of tuberculous osteomyelitis was made [6]. TB can show extremely diverse imaging patterns and can affect any organ or bone. It mimics various diseases and involves every organ. Radiologists should have adequate knowledge of such atypical presentations so that early recognition and detection can be made, which, in turn, aids in appropriate and adequate treatment. It also helps in preventing

permanent disability [7]. Tuberculosis should be considered as a differential diagnosis even if the presentation and imaging findings are atypical since India is an endemic country [8].

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