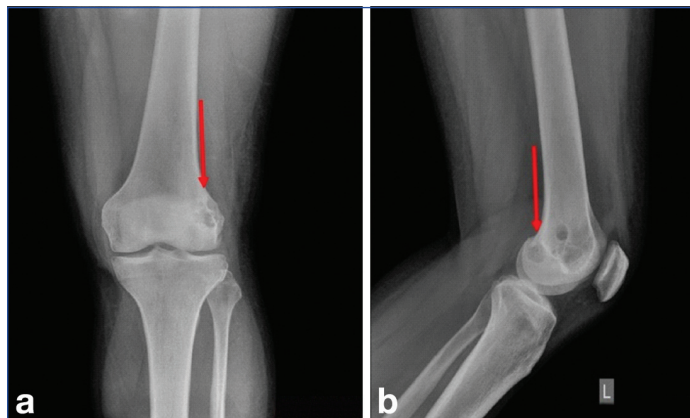


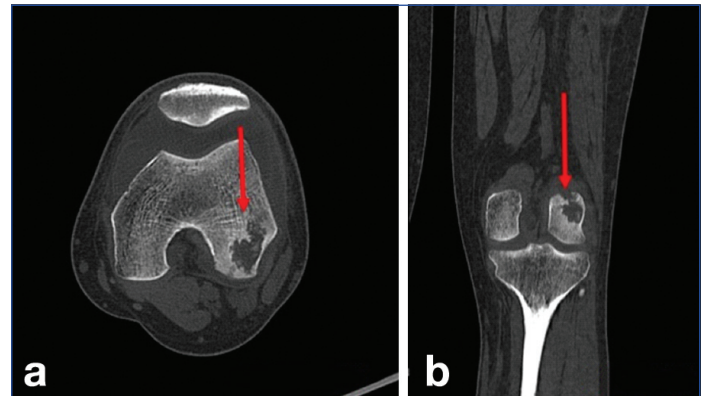
Tubercular Osteomyelitis of Femur: Imaging Findings

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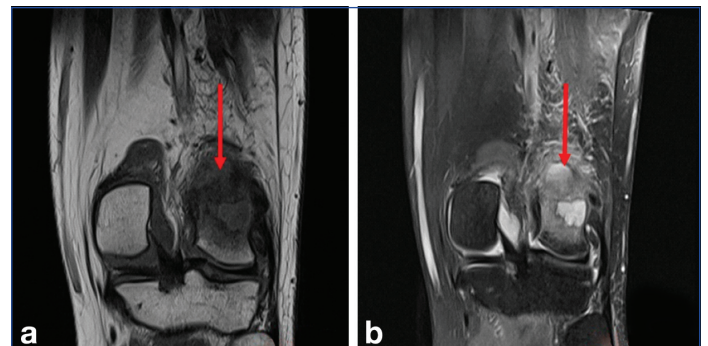
A 28-year-old male patient presented with chief complaints of pain in his left knee for one month, difficulty walking for three weeks, and on-and-off fever for the past month. He denied any history of weight loss or loss of appetite. There was no significant past medical history. Local examination of the left knee revealed swelling and tenderness over the lateral femoral condyle with restricted range of motion. Blood investigations were normal except for an elevated erythrocyte sedimentation ratio of 36 mm/hr. Initially, an X-ray was performed, showing multiple small lytic areas within the epimetadiaphyseal region of the lateral condyle of the lower end of the femur [Table/Fig-1]. Subsequent Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scans were conducted, revealing a large lytic lesion with irregular margins in the posterolateral cortex of the lower end of the femur [Table/Fig-2], which appeared hyperintense on Proton Density Fat Saturated (PDFS) MRI images and hypointense on T1-weighted images [Table/Fig-3]. Severe surrounding marrow oedema was noted, along with mild reactive joint effusion. The tibia and fibula appeared normal, without synovial thickening or joint involvement. The knee joint ligaments were also normal. Based on the imaging findings, acute osteomyelitis was considered, with a primary bone tumour as a differential diagnosis. The patient underwent excision biopsy and curettage under spinal anaesthesia, revealing a granulomatous infection with positive staining for acid-fast bacilli. The patient was prescribed antitubercular drugs and advised to undergo physiotherapy, knee bending, and static quadriceps exercises. The patient's condition improved, and he was subsequently discharged.



[Table/Fig-1]: X-ray left knee anteroposterior (a) and lateral (b) view shows lytic areas in posterolateral femoral condyle involving the epimetadiaphyseal region (red arrows).



[Table/Fig-2]: CT Axial (a) and coronal (b) images of the left knee showing a lytic area in the posterolateral femoral condyle with irregular margins (red arrows).



[Table/Fig-3]: Coronal T1 (a) and Proton Density Fat Saturated (PDFS) (b) MRI of the left knee shows the lytic area as hypointense on T1 and hyperintense on PDFS images with severe surrounding marrow oedema (red arrows).

evidence of pulmonary involvement [2]. Esteban PL et al., reported a case of tubercular osteomyelitis of the tibia, which presented similarly to present case with a lytic lesion in the tibia, but included a large soft tissue component, unlike present case, where the affected bone was the femur [2]. Combalia A et al., reported a case of tubercular osteomyelitis with lytic foci in the medial condyle of the femur, similar to present case, but in present case, the involvement was in the lateral femoral condyle [3]. Tubercular osteomyelitis should be considered in the differential diagnosis of cases involving lytic lesions in the knee joint, as it can mimic a primary bone tumour [5]. Tubercular osteomyelitis can imitate various other diseases, and a high clinical suspicion, along with appropriate imaging modalities and histopathology, is necessary for an accurate diagnosis.

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