Pyomyositis with Multifocal Osteomyelitis - An Uncommon Presentation of Skeletal Tuberculosis

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A 14-year-old girl presented with a painful swelling over the anterolateral aspect of the left thigh since three weeks. It had gradually increased in size. Over a period of next one week, she developed painful swellings over the base of left ring finger, right elbow and left supraclavicular region in that succession. She had moderate fever for last seven days. She denied any history of trauma.

Physical examination showed 10 cm x 5 cm tender swelling over the anterolateral aspect of the left thigh (Fig. 1) and 5 cm x 7 cm swelling in the left supraclavicular region (Fig. 2) and a discharging sinus at left little finger base (Fig. 3). Patient was empirically started on broad spectrum antibiotics. Haematological work-up showed an elevated erythrocyte sedimentation rate of 60 mm/hour with normal total and differential leukocyte count. Chest radiograph was normal. Radiograph of the left hand and right elbow showed destruction of the fifth metacarpal bone and distal humerus and proximal ulna respectively with extensive bony erosion, lysis and new bone formation with destruction of the elbow joint (Fig. 4). MR imaging revealed an abscess lying mainly in the anterior compartment of left thigh with destruction of vastus lateralis muscle without any bone involvement. MR imaging of the supraclavicular region showed erosions of the scapular spine with an abscess which was drained by needle aspiration yielding a thick pus. During this period, she developed increasing pain and swelling over the right hand. An incision and drainage with debridement of abscess of the left thigh was performed. Gram-stained smear, bacterial culture and staining for acid-fast bacilli were negative. The aspirate was positive for TB-DNA on polymerase chain reaction. Four drug antituberculosis treatment (HREZ) was initiated at this point. Weeks later, cultures of aspirate grew M. tuberculosis. The patient gradually made a recovery but developed contracture at the right elbow joint.

Skeletal TB accounts for 10% to 20% of all tuberculous infections, but multifocal skeletal involvement is seen in less than 5% of these cases. Pyomyositis is the least common presentation of extraspinal musculoskeletal tuberculosis while simultaneous multifocal tuberculous osteomyelitis with tuberculous pyomyositis is probably very uncommon. Extrapulmonary TB may often present with nonspecific and protean manifestations and hence the delay in diagnosis. Skeletal muscle is one of the most resistant tissues to mycobacterial infection, reasons being poor oxygen content, high lactate concentration and a scanty reticuloendothelial tissue. The exact mechanism of how M. tuberculosis reaches the musculoskeletal system is not fully understood. Tuberculous infection of skeletal muscles is usually secondary to direct extension from a bone, synovial lining of a joint, infected tendon sheath, direct inoculation, or lymphohematogenous dissemination. We wish to highlight this uncommon presentation of skeletal TB. In such cases, the diagnosis is usually confirmed only after histopathological or microbiological examination. Thus, a high index of suspicion and multidisciplinary approach in diagnosis is required for early treatment and limiting morbidity.

References


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