Tuberculous osteomyelitis masked by staphylococcal infection

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Tuberculous osteomyelitis of humerus is a rare condition (1.8% of skeletal tuberculosis) [1]. Its presentation differs clinically from other tuberculosis and can be difficult to diagnose in early stages especially if masked by concomitant staphylococcal infection [2,3].

A 16-year-old teenager presented with a history of right shoulder pain for the past 3 months. A rapidly progressive swelling around was associated. There was no history of trauma or manipulation. He was febrile, right shoulder had a diffuse swelling with fluctuation. There was no obvious infection elsewhere. Shoulder mobilisation was painful and restricted. Blood leucocytes were 13,500 cells/mm³, ESR 62 mm and CRP 104 mg/dl. Tuberculin skin testing was negative. There was no growth from sputum, urine or blood culture. Plain radiograph disclosed a large epiphyso-metaphyso-diaphysal humerus defect without cortical disruption (Fig. 1). This was confirmed by MRI which also showed a large subdeltoid fluid collection. Chest radiograph was normal. Needle aspiration puncture of the collection yielded 60 cc of purulent fluid. Culture showed a sensitive Staphylococcus aureus. Acid-fast bacillus stain was negative. Antibiototherapy with daily IV ofloxacin 400 mg was introduced for 3 months and gentamycin 160 mg for 15 days. Necrotic bone was debrided from humeral head and 300 cc of purulent material drained. The joint was free of pus. Within 3 weeks the shoulder was free of pain and the patient was sent home with oral treatment.

One month later, the result of histological examination of the capsule showed necrotic bone with mixed inflammatory cells, multinucleated giant cells and caseating granuloma typical of tuberculosis. The patient received antituberculosis drug during 18 months.

Tuberculous osteomyelitis is uncommon. Initial symptoms are often overlooked and diagnosis is frequently delayed for several months. On examination of 140 bone specimens, Sinnott et al. [4] found 4 patients with unsuspected tuberculous osteomyelitis whose diagnosis was obscured by concomitant staphylococcal osteomyelitis. Usually, superinfection is a complication of draining sinus. This case illustrate that tuberculosis can run a chronic and extremely insidious course. We suggest that the index of suspicion for skeletal tuberculosis should be raised in the appropriate clinical setting by requesting cultures for acid-fast bacilli, bone and synovial biopsies especially in endemic areas [5].

References