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Isolated Tuberculosis of Inferior Angle of Scapula – A Rare Case

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Abstract: Tuberculosis of the scapula is a rare but known entity. We report a case of tuberculosis of the inferior angle of scapula, which has been managed successfully with anti-tubercular drugs. CT scan or MRI should be considered along with FNAC of the swelling for correct diagnosis.
Keywords: Tuberculosis, Scapula

INTRODUCTION

Tuberculosis has been a major healthcare challenge for the third world countries, with India alone accounting for 25 % of total cases of tuberculosis worldwide [1]. This incidence has been resurrected with the rising burden of acquired immunodeficiency syndrome [2]. The atypical presentations of tuberculosis continue to be a major diagnostic challenge leading to delayed diagnosis or misdiagnosis. Tuberculosis of skeletal system accounts for around 2% of all TB cases with spine involvement being the most common type [3]. Diagnosis of flat bone tuberculosis is facilitated by radiological imaging and diagnostic confirmation predominantly depends on histopathological and microbiological assessment [3].

CASE REPORT

A 16-year-old female presented with dull aching pain and gradually progressive swelling over the left scapular region since 2 months. Pain would aggravate on lying down and increase in movements. On examination the patient had a swelling measuring 4 x 2 cm located at the lower angle of scapula. The swelling was firm and tender with no discharging sinus or associated decrease in range of movement. The patient had an ESR of 18mm/hr with a chest x-ray having no signs of pulmonary tuberculosis. CT scan of Chest was done which suggested a osteolytic lesion with surrounding sclerosis at the lower tip of scapula measuring 4 x 3 cm (Fig. 1). In view of CT scan findings a CT guided biopsy was done and tissues were sent for histopathology, Ziehl-Neelsen (ZN) stain and culture. The histopathology was suggestive of epitheloid cells and multinucleate giant cells. With the acid fast bacilli identified on ZN stain and in view of histopathological findings the patient was diagnosed to have tuberculosis of bone.

The patient was started on anti-tubercular therapy for nine months. On follow-up the patient's symptoms resolved after 2 months of therapy and the swelling subsided completely after 6 months. At follow up at one year the patient was symptom free.

Fig 1: 3 D Reconstruction CT Scan of left Scapula – showing osteomyelitis of inferior angle of left scapula.

DISCUSSION

Isolated flat bone tuberculosis is rare, with scapular tuberculosis consisting of less than one per cent of skeletal tuberculosis. Most of the cases of skeletal tuberculosis are secondary to haematogenous or lymphatic dissemination of bacilli from a primary focus. Isolated bone involvement without any primary in absence of immune-compromised status and exposure to tuberculosis in a well active young patient raises question about its mode of spread to this unusual site like scapula. Direct inoculation of the bacilli to the

muscle through needle while giving injection and during trauma could explain this presentation [4]. But in our patient no such history was present.

Though x-ray would occasionally be useful the radiological assessment predominantly relies on the cross sectional imaging like CT scan or MRI. The differential diagnoses for the radiological appearance on CT include pyogenic infections, tumours of bone, telengiectatic osteosarcoma, sarcoidosis or eosinophilic granuloma [3, 5]. The diagnostic confirmation predominantly relies on Fine needle aspiration or tissue culture studies [6, 7]. FNAC is a good alternative to open biopsy as it can show the granulomatous reaction in 73% of time, bacteria in 64% and positive culture in83% of time [8]. In the absence of giant sequestra, most of the tubercular osteomyelitis can be treated with anti-tubercular therapy only. The effective multidrug chemotherapy can resolve the sequestra and can cause early disease remission. Nine months of anti-tubercular therapy in this case had completely healed the lesion. Surgical removal is required in patients with giant sequestra or where the response to conservative treatment of 4 to 6 weeks is not satisfactory [9]. To conclude, diagnosis of Tubercular osteomyelitis should be considered as one of the causes for isolated scapular swelling in endemic areas. The diagnosis is predominantly by radiological assessment and histopathological confirmation. With most of the cases responding well to anti-tubercular therapy, the predominant challenge lies in early suspicion and diagnosis.

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