Tuberculosis of the scapula

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ABSTRACT

Tuberculosis of the scapula is a rare clinical entity. To the best of our knowledge, only four cases of tuberculous osteomyelitis of the scapula have been reported in literature till date. We report a case of tuberculosis of the inferior angle of scapula, which has been managed successfully with antitubercular drugs. This case also illustrates the difficulties in diagnosing tuberculous scapula as it has an insidious onset, paucity of constitutional symptoms, insignificant early radiographic findings and frequent absence of associated pulmonary involvement. A high index of suspicion is mandatory to avoid delayed diagnosis.

Key words: Tuberculosis, scapula, osteomyelitis

INTRODUCTION

We report a case of tuberculous osteomyelitis of the scapula involving the inferior angle first time in the literature. To the best of our knowledge, only four cases of the tuberculous osteomyelitis of the scapula have been reported in literature, one involving acromian[1] and the other three the body of the scapula.[1-3]

Pure tuberculous osteomyelitis involving flat membranous bone, as illustrated in this report, is extremely rare. Because of that, and a low index of suspicion for its diagnosis, early lesions may be neglected which should not be.

CASE REPORT

A twenty six-year-old married female presented with swelling and pain in the lower left scapular region for the last six months. Swelling was initially of peanut size and was gradually increasing in size. Swelling was associated with dull pain especially when it was pressed during sleeping. Pain was not aggravated by the movement. There was no history of trauma, fever, loss of appetite, chronic cough etc. the patient had no chest complaints or other constitutional symptoms. There was no history of tuberculosis with her and in her family members.

On examination, swelling was found to be approximately 72 mm x 40 mm in size, soft, cystic, globular and non-tender with restricted mobility at the posterolateral aspect of the left side of the chest wall near the inferior angle of scapula. Skin over the swelling was normal and was not attached to it. There was no discharging sinus or pointing abscess. Bruit or any pulsation was not present in the swelling. Temperature of the swelling was not raised. On overhead abduction of the left upper limb, swelling was moving with the inferior angle of scapula and this caused pain to the patient. Examination of the left shoulder revealed full range of motion.

Blood profile revealed haemoglobin level of 12.2 gm%. the white blood cell count was normal. ESR was 12 mm/hr. Other routine blood investigations, urine analysis and serum chemistry were found to be normal. HIV test was negative. Mantoux test was positive.

The plain anteroposterior radiograph of the left scapular region showed lytic lesion of approximately 18 mm x 11 mm at the inferior angle of scapula [Figure 1]. There was no surrounding soft tissue involvement. Other visualized bones appeared unremarkable. The
Figure 1: Anteroposterior radiograph showing well defined lytic lesion at the inferior angle of scapula

plain anteroposterior and lateral radiographs of the dorsal spine were also normal.

Doppler-assisted High-resolution ultrasonography showed cystic lesion having complex fluid seen near inferior angle of left scapula, which was eroded [Figure 2]. The lesion was extending anteriorly. Few loose bony fragments (sequestra) were seen within the lesion. The lesion showed minimal peripheral vascularity and no communication with the thorax was noticed.

With USG guided aspiration, approximately 15 ml of fluid with debris was removed. A cytological examination of the aspirate showed necrotic material, caseation, epitheloid cells and a granulomatous lesion strongly suggestive of tuberculosis. Few Langerhans type of giant cells was also noticed. Ziehl-Neelsen stain showed the presence of acid-fast bacilli. Subsequent culture confirmed the presence of Mycobacterium tuberculosis, which was sensitive to streptomycin, rifampicin, isoniazid, ethambutol and pyrazinamide. The culture examination for pyogenic bacteria did not grow any organisms.

Based on the history, clinical examination, and investigations, the patient was put on daily antitubercular regimen of streptomycin 0.75 gm deep intramuscularly, rifampicin 450 mg orally, isoniazid 300 mg orally and pyrazinamide 1.5 gm orally. The therapy was supplemented with pyridoxine 100 mg daily orally and hepatoprotective drugs.

All the above-mentioned four drugs were given for the first three months followed by rifampicin and isoniazid with pyridoxine and hepatoprotective drugs till date. The patient responded very well in the nine months of multi-drug antitubercular therapy. She has got symptomatic improvement and swelling has completely disappeared now. The radiological recovery was in the form of sclerosis around the erstwhile lytic area and absorption of the sequestrum after six months [Figure 3]. Treatment is ongoing with proper follow up at regular intervals.

DISCUSSION

Pure tuberculous osteomyelitis involving flat membranous bones is extremely rare. Tuberculosis of the scapula is also a rare clinical entity. Very few cases of tubercular osteomyelitis of scapula have been reported till date and all of these were associated with other forms of tubercular osteomyelitis.[1-3] In the present case, no other focus could be detected.

Unfortunately, there is frequently a delay in
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The reasons behind the delay in early diagnosis in the present case are no pulmonary involvement, insidious onset of symptoms with minimal signs of local inflammation and no early characteristic radiographic finding.

No classic X-ray changes were observed but presence of focal area of osteolytic lesion, located eccentrically with little or no surrounding reactive bone, i.e. with minimal marginal sclerosis provide helpful diagnostic evidence. Computed tomography is more helpful than plain X-rays in diagnosis as it clearly demonstrates the abscess. The value of fine needle aspiration cytology in the diagnosis of tuberculosis of bone and joints has also been reported.

Most authors feel that the sequestra of tuberculous osteomyelitis are absorbed under adequate anti-tuberculosis therapy and surgical removal is not needed in most of the cases. Surgical removal is required in patients with giant sequestra or where the response to conservative treatment of 4 to 6 weeks is not satisfactory. In the present case, as we got symptomatic improvement with antitubercular drugs, we had decided to continue the same.

In conclusion, this case brings out a very rare presentation of osseous tuberculosis i.e. tuberculosis of the scapula without any other focus. The diagnosis is often delayed due to lowered awareness, insidious nature, lack of characteristic early radiographic findings and frequent lack of constitutional or pulmonary involvement. A high index of suspicion is necessary for early diagnosis, especially in the context of pain and swelling near or over the bone in a high-risk individual.

REFERENCES