

# Chest Wall Tuberculosis

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## ABSTRACT

*Chest wall tuberculosis is a rare form of tuberculosis. Its presentations often misguide the clinician and produce a diagnostic dilemma. High index of suspicion should be exercised. A case of chest wall tuberculosis in a 90-year old male is reported that was managed with variety of diagnosis. Careful approach to a patient of chest wall nodules without any other signs and symptoms of tuberculosis may clinch early diagnosis.*

*Key words* Chest wall, Tuberculosis, Atypical presentation, Diagnostic dilemma.

## INTRODUCTION:

Chest wall tuberculosis is rare and poses a diagnostic and therapeutic challenge.<sup>1</sup> Chest wall tuberculosis (TB) constitutes 1% to 5% of all cases of musculoskeletal TB which represents 1% to 2% of TB overall.<sup>2,3</sup> Chest wall TB diagnosis is usually delayed due to a lack of specific signs and symptoms.<sup>4</sup> TB abscesses of the chest wall are most frequently found at the margins of the sternum and along the rib shafts.<sup>5</sup> Herein we report one such case that had an unusual presentation.

## CASE REPORT:

A ninety-year-old man presented for evaluation of gradually enlarging multiple soft tissue mass in the right upper anterior thoracic wall. The masses had been present for two years. With the diagnosis of infective lesion he was prescribed several antibiotics. An FNAC was done which revealed cellular atypia.

The medical history of this patient was unremarkable. He had no pulmonary symptoms. On examination patient was afebrile and well nourished. The findings on clinical examination were unremarkable, except for three large, firm, mobile and non-tender soft tissue mass in the right upper anterior thoracic wall along the right sternoclavicular joint and right side of upper sternum. The white blood cell count was normal. All biochemical examinations as well as erythrocyte sedimentation rate were within normal range. A tuberculin test was performed and was inconclusive.

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A plain radiograph of the chest revealed normal findings. CT scan showed three inhomogeneous cystic formations: one extending to sternoclavicular joint and another to lateral border of sternum. The other mass was intercommunicated with previous two, between the pectoralis major and minor muscles, adjacent to the costal cartilage. The overlying skin appeared normal, with no wounds, scars, rash, or sinuses. He was then advised to have an excisional biopsy to exclude any malignancy. But the patient delayed it for three months and took homeopath treatment. During this period he developed a discharging sinus from the larger mass. The discharge was serosanguinous in nature. He then attended again and re-evaluation revealed an ulcer of irregular undermined margin with hard base. The associated masses were also hard in consistency with irregular surfaces. The clinical findings were consistent with a rodent ulcer.

At the time of operation, the subcutaneous tissue was found to be oedematous. Deeper dissection, within the muscle layers, revealed necrotic tissue debris and was excised piece meal extending up to sternoclavicular joint and sternum. As there was no evidence of any neoplasm, the soft tissues were then debrided and specimens were sent for histological analysis. The tissue fragments submitted for histologic examination consisted of fibrocollagenous tissue with necrotizing granulomatous inflammation. There were large areas of necrosis, which were lined by epithelioid histiocytes, Langhans type giant cells and fibroblasts (Fig I). The patient is currently receiving daily antituberculous chemotherapy, consisting of isoniazid (300 mg), rifampicin (600 mg), pyrazinamide (2 g), and pyridoxine (50 mg). The sinus which was excised during operation healed after one and a half month (Fig II). Otherwise, the postoperative course has been uneventful and a postoperative CT scan

showed no recurrence of the drained tuberculoma.

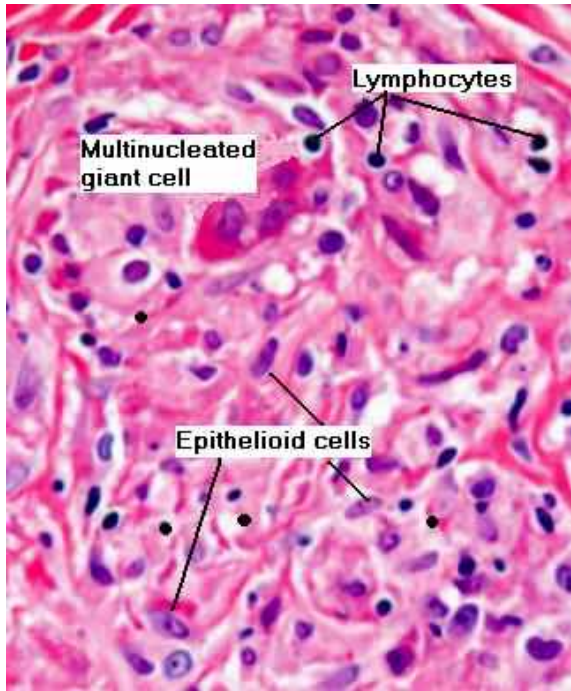


Fig I: Histopathology showed features of tuberculosis



Fig II: After excision of the masses

**DISCUSSION:**

Chest wall tuberculosis often involves the margins of the sternum and rib shafts along with abscess formation.<sup>5</sup> Chung et al had reported that CT scan is a useful tool for investigation in the diagnosis of a tuberculous retromammary abscess and also in determining the extent of an abscess.<sup>6</sup> Our case involved multiple tuberculous lesions without any

abscess formation. CT scan was invaluable to diagnose the extent of involvement in our case. Site of involvement are also similar to previous studies but lack of abscess formation explains the diversification of presentation of chest wall TB.

Infection of muscle by Mycobacterium may result from hematogenous spread or from inoculation from nearby primary foci.<sup>7</sup> The granulomatous inflammation of anterior chest wall involvement is very rare. Our report shows that possibility of tuberculous aetiology should be considered even for atypical sites of skeletal inflammation. It should be considered even in an immunocompetent patient, in areas of high endemicity. An excision biopsy in the diagnostic process facilitates prompt diagnosis and the effective management, to prevent serious bone and joint destruction.

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