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Tuberculous mastitis mimicking malignancy--a case report with review of literature

M Y. Sheikh
T A. Rana
M U. Islam

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Tuberculous mastitis is an uncommon disease even in areas where the incidence of pulmonary and extra pulmonary tuberculosis is still very high\(^1\). We present a case of tuberculosis mastitis which presented as a breast lump. On radiological findings, erosion of rib was also seen with pleural based mass mimicking malignant process.

**Case Report**

A 40 year old lady with previous history of pulmonary tuberculosis presented with the recent onset of non-tender, 2x2 cms, freely mobile lump in the left breast. Chest radiograph showed a pleural based lesion with erosion of fourth rib on right side with associated soft tissue mass (Figure 1a).
Because of the radiological finding malignancy with metastasis to the chest wall was suspected. A mammogram was done which revealed a well defined nodular density without any associated microcalcifications, skin thickening and nipple retraction (Figure 1b).
Because of the eroded rib and soft tissue mass a CT scan was performed which showed a soft tissue density mass in relation to the right fourth rib with underlying destruction. No other intrathoracic lesion or lymphadenopathy seen. A CT guided fine needle aspiration biopsy of the thoracic lesion was done. The smear showed acid fast bacilli and later on mycobacterium tuberculosis was cultured. Biopsy of
the breast lump was also performed which showed epitheloid cells with granuloma formation indicating tuberculosis.

Discussion

Tuberculosis in both primary and disseminated form is still considered a common disease in our country. Tuberculosis involving the breast - tuberculous mastitis is still an uncommon and rare entity. Even at its peak incidence in the pre-antibiotic era, the tuberculous mastitis accounted for 2% of the breast diseases. In 1829, Sir Astley Cooper was the first person to describe tuberculous mastitis. Since then occasional reports of tuberculous mastitis have been appearing in literature mostly from areas where tuberculosis is still prevalent. The most common presentation of tuberculous mastitis is benign breast lump. Other presentation includes sinus or abscess formation. There is no general consensus regarding the pathogenesis of tuberculous mastitis. The prevailing theory being direct extension or lymphatic spread and appears that the route of spread is exactly opposite to the route by which carcinoma of breast may metastasise to lungs. The hematogenous route remains doubtful and it seems that breast is resistant to tuberculosis infection even in patients with debilitated disease. The mammographic presentation usually is well defined mass suggesting fibroadenosis. The clinical diagnosis of tuberculous mastitis is very difficult as it may be indistinguishable clinically from carcinoma and diagnosis rests on biopsy. Although the diagnosis is essentially on histological grounds but acid fast bacilli are only present in few of cases. Algaratnam has reported histological appearance of acid fast bacilli in 3 and positive culture in 4 of the 16 cases. In our case the presentation was complicated by associated pleural mass as well as a rib destruction distant to the primary breast lesion mimicking a malignant process with metastasis. The final diagnosis was made on fine needle aspiration and histopathology of rib lesion as well as breast lump.

References