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Case Report

Tuberculous Mastitis: A Case Report

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Abstract

Tuberculous mastititis is an uncommon clinical entity and usually affects women from the Indian subcontinent and Africa. It often mimics breast carcinoma and pyogenic breast abscess. Fine needle aspiration cytology (FNAC) is a very essential diagnostic tool when other routine laboratory investigations are not helpful in reaching to the conclusion. Tuberculosis of the breast is an uncommon presentation of tuberculosis even in countries where the incidence of tuberculosis is high. In most of the cases radiological imaging is not diagnostic. Treatment with standard antituberclar drugs was associated with complete resolution of the lesion.

Key words: Tuberculosis, Mastitis, Mycobacterium tuberculosis

Introduction

Tuberculosis is one of the oldest diseases known to mankind. It has both pulmonary and extra pulmonary manifestations. Although approximately one third of the world's population is infected with tuberculosis but involvement of breast is relatively rare phenomenon [1]. Tuberculosis of the breast was first of all documented in medical literature by Sir Astley Cooper in 1829[2]. Later on several cases of tuberculous mastitis have been reported worldwide [3-5]; they are reported more frequently in India, probably due to a high prevalence of tuberculosis infection in India [6, 7].

Tubercular mastitis occurs more frequently in women and a majority of the patients are belong to age group of 15 to 45years however in recent past it has been reported in elderly also [8].The various risk factors associated with tubercular mastitis are multiparity [9], lactation[10], trauma, [10], [11] and past history of suppurative mastitis [4, 11]. Co-existing carcinoma of the breast has been reported in many studies[12,13] suggesting that even if tuberculous mastitis is identified, adequate tissue biopsy must be examined to rule out co-existing malignancy.

Tubercular mastitis may be primary, when no demonstrable tuberculous focus exists, or secondary to a lesion elsewhere in the body [14]. Primary infection of the breast may occur via skin abrasions or through the duct openings on the nipple. Direct extension from contiguous structures like the underlying ribs is another possible mode of infection. However, it is generally believed that infection of the breast is usually secondary to a tuberculous focus elsewhere in the body, which may not be clinically or radiologically apparent. Such a focus could be pulmonary or a lymph node in the paratracheal, internal mammary, or axillary group.

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Involvement of the breast in such cases is by haematogenous spread [15]. Whether the axillary lymph node was the site of primary infection or secondary to the mammary tuberculosis is a debatable point.

Few researchers found that lactation is known to increase the susceptibility of the breast to tuberculosis [14, 16]. In these women, probably the stress of childbearing and increased vascularity of the breast facilitates infection and dissemination of the bacilli. Tuberculosis of the male breast is an extremely rare condition; the common mode of presentation is a unilateral breast mass with or without ulceration along with axillary lymphadenopathy [17].

There are three clinical types of mammary tuberculosis namely: nodular, disseminated, and sclerosing [18].The nodular variant is often mistaken for a fibroadenoma or carcinoma. The disseminated variety usually presents as caseation and sinus formation. Sclerosing tuberculosis is slow growing without suppuration and usually affects older women. Patients presenting with a breast lump associated with discharging sinuses are easily diagnosed but need to be differentiated from actinomycosis by the absence of sulphur granules in the discharge and by fungal culture. The isolated breast lump without sinuses mimics carcinoma as the lump is usually ill defined, irregular, and occasionally hard. Pain in the tuberculous lump is present more frequently than in carcinoma. Involvement of the nipple and areola is rare in tuberculosis. Due to proximity of the axillary nodes, upper outer quadrant of breast is the most frequently involved site, though any area of the breast can be involved.

Constitutional symptoms and pulmonary tuberculosis were found associated in only few of the patients.

Tuberculous mastitis can be diagnosed reliably by cytological evidence of epithelioid granulomas, Langhans' giant cells, and lymphohistocytic aggregates. Mammography, ultrasonography and Gd-DTPA-enhanced dynamic MRI have also been used to

diagnose tubercular mastitis [19]. Mammographic findings include a mass, calcification, asymmetric density with spiculated margins and axillary node enlargement. On ultrasonography, a smooth bordered mass with thin boundary and heterogeneous, intermediate internal echoes are most commonly demonstrated. On Gd-DTPA enhanced dynamic MRI, almost half of the lesions show a significant enhancement at the first minute after injection. The maximum enhancing is usually greater than 500 normalized units. The enhancing pattern is usually a smooth or irregular ring appearance. However the demonstration of acid-fast bacilli on Ziehl Neelsen (ZN) stain or growth of *M. tuberculosis* on culture of the tissue specimen remains the gold standard for diagnosis despite 38% yield in a large series of 160 cases [15].

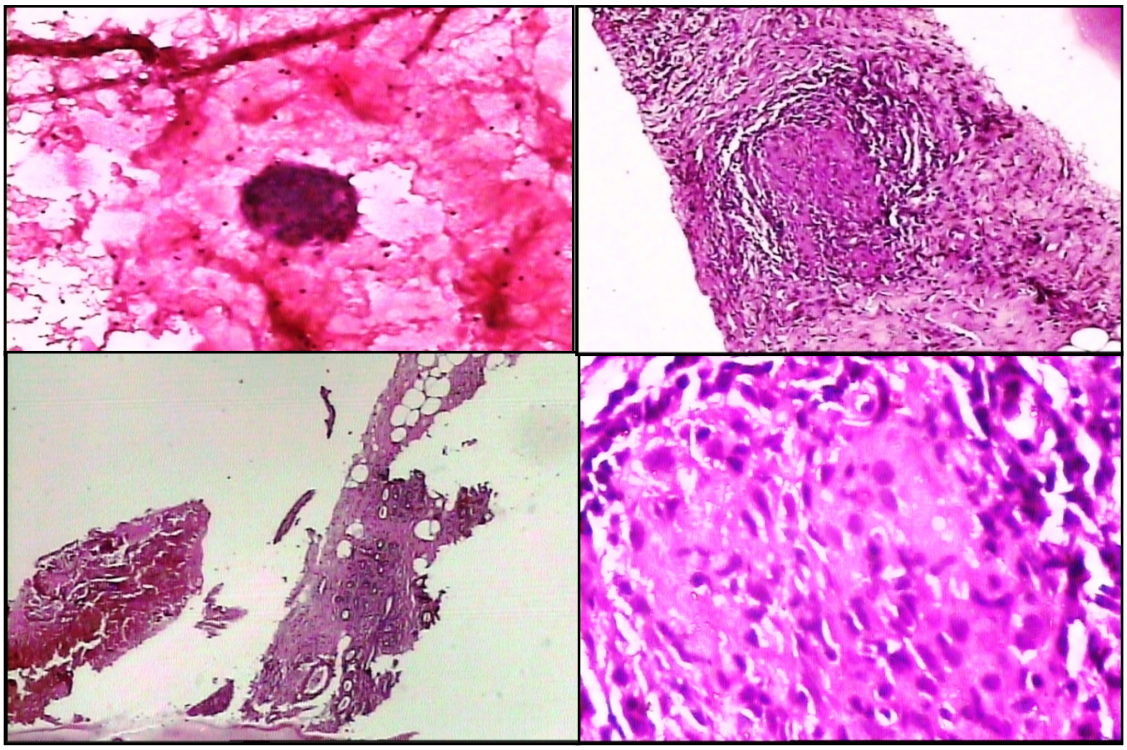
Earlier, the treatment modality used to be exclusively surgical resection of the infected tissue, but now anti-tubercular chemotherapy supplemented by limited surgery or aspiration of abscesses [8, 11] is considered adequate treatment. Tuberculous mastitis should be treated as any other form of extra-pulmonary tuberculosis generally for six months as recommended by Revised National Tuberculosis Control Programme unless drug resistance is present.

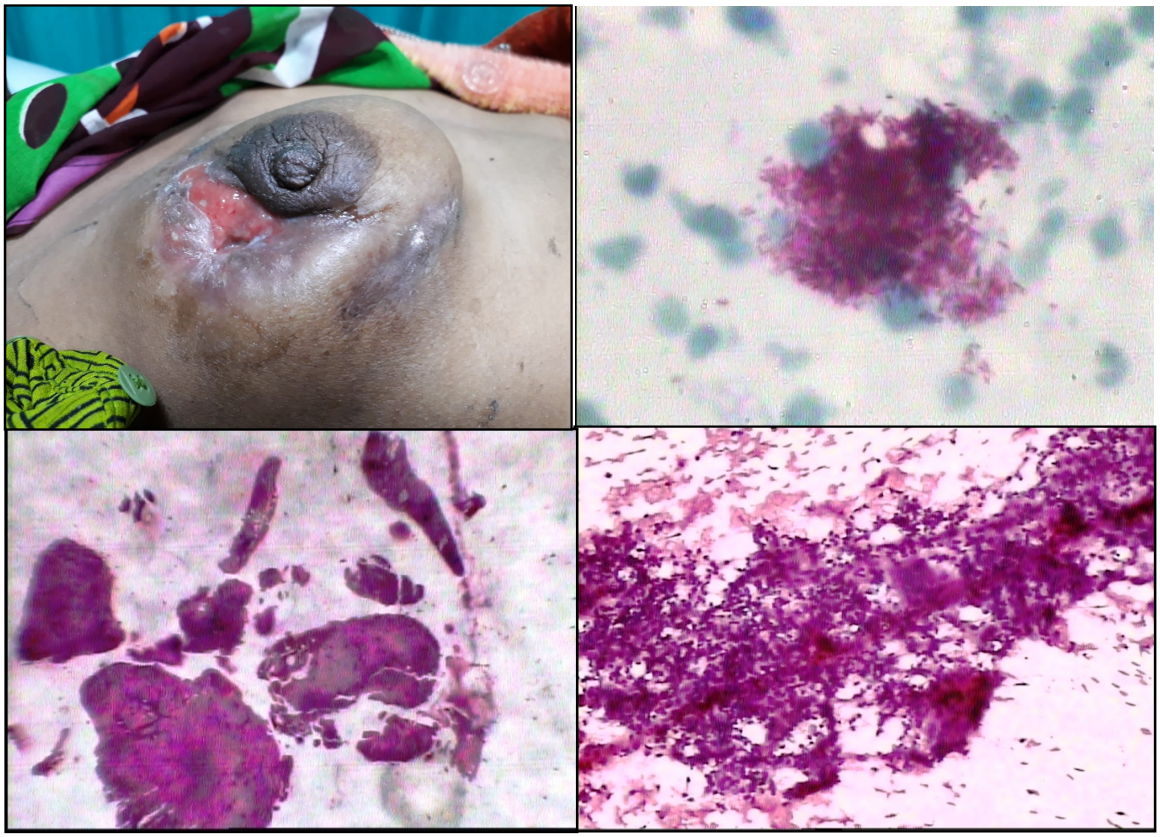
Review of case

A 30 year female with a history of lactation, presented to the cytology section, department of pathology, in a tertiary center, with chief complaints of right breast lump with ulceration, pain and fever for three months. There was no history of productive cough or weight loss. The patient had taken oral antibiotic therapy for 2 weeks. Her general examination was within normal limits. Examination of right breast showed ill defined slightly tender firm lump of 14×15mm size on upper and outer quadrant with ulceration on overlying skin. Nipple and areola was more or less normal. Axillary and cervical lymph nodes were not enlarged. Examination of respiratory system was within normal limits.

Her routine hematological examination revealed slight leucocytosis, ESR was 40mm in 1st hour. Chest X-ray was normal. FNAC of breast lump showed granulomatous inflammation.ZN staining was negative. Pus culture revealed staphylococcus aureus which was sensitive to linezolid, amikacin, vancomycin, co-moxiclav.Biopsy of the breast lump revealed breast parenchyma with granulomas with epithelioid cells with langhans giant cells. There was no evidence of malignancy.

Above mentioned features suggested granulomatous mastitis.In view of abscess, incision and drainage of abscess and biopsy was done under general anaesthesia.The patient was treated with 10 days of parenteral co-moxiclav with amikacin.Subsequently ATT was started and patient responded with treatment.





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