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TUBERCULAR MASTITIS – AN UNCOMMON ENTITY OF THE COMMON DISEASE: A CASE REPORT

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ABSTRACT: Tuberculosis (TB) is a very common infection affecting the Indian population. Breast TB is a very rare disease and constitutes only 0.025% - 1.040% of breast diseases. 25 year old married female was diagnosed as breast abscess and treated in the peripheral hospital with antibiotics and anti-inflammatory for period of one year and later referred to our institution. Even after starting with antitubercular treatment (ATT), size of lump did not reduce, she had to undergo simple mastectomy. Medical therapy is the mainstay of treatment with ATT, surgical intervention may be needed in upto 14% of the patients. Thus high index of suspicion is necessary in diagnosing the disease. Greater awareness of this uncommon entity of a common disease along with early institution of medical line of management with ATT may avoid surgery.

KEYWORDS: Mastitis, Mammary Tuberculosis, Primary Tuberculosis

INTRODUCTION: Tuberculosis (TB) is a very common infection affecting the Indian population. The infection can involve any organ and can mimic any other illness, hence known as great mimicker ¹. Amongst the extrapulmonary sites, breast is an infrequent site of TB. Breast TB is a very rare disease and constitutes only 0.025% - 1.040% of breast diseases. ²

Sir Astley Cooper in 1829 first described breast TB as "Scrofulous swelling at the bosom of young women suffering from enlargement of cervical glands". It has been classified into three categories namely nodular, disseminated and abscess varieties ². The diagnosis of mammary TB can be confirmed with a combination of strong clinical suspicion and cytological findings. The demonstration of acid fast bacilli (AFB) on ZN staining or culture remains the gold standard for diagnosis. Less than 100 cases of breast tuberculosis were reported from India till 1987³. Few scattered case reports and case series have been reported.

CASE REPORT: 25 year old female, mother of a 3 year old child was referred from a peripheral hospital for the complaint of lump in the left breast for 1 year. Lump was painless to start with, but noticed pain over the lump for last 6 months. Initially she was treated in the peripheral hospital with analgesics and other anti-inflammatory drugs; she also received several courses of antibiotics. On examination: 6*7 cm hard lump in the inner quadrant of left breast with ulceration of overlying skin noted, lump was not fixed to chest wall, nipple retraction and distortion of nipple areola complex were seen. Multiple sinuses opening were noted in lower inner and lower outer quadrants. No axillary lymphadenopathy. No evidence of tuberculosis elsewhere in the body and no past history of tuberculosis or antitubercular treatment (ATT).

Fine needle aspiration cytology showed features suggestive of granulomatous mastitis. ZN staining detected acid fast bacilli (AFB) and she was started on ATT with isoniazid, rifampicin, pyrazinamide, and ethambutol. Even after the treatment for 3 months, there was no decrease in size

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of lump with persistence of non-healing ulcer with discharge. Simple mastectomy with axillary lymph node biopsy was done and the specimen was sent for histopathological examination (HPE). HPE showed features suggestive of granulomatous mastitis probably tubercular. Postoperative period was uneventful and patient was discharged on post op day 10 after removing the sutures. Wound healed well. Patient received complete course of ATT. Patient was followed upto 6 months with no evidence of disease.

DISCUSSION: TB of the mammary gland is a rare disorder; it is often mistaken for other benign, but most commonly to malignant lesions of the breast ⁴. TB breast constitutes approximately 0.25- 1% of all surgically treated breast disease and 0.1 % to 0.5% of all tubercular cases ^{5,6}.

TB mastitis is more commonly seen in females of reproductive age group, especially during the lactation period when they are more susceptible, as the lactating breast is more vascular and predisposed to trauma. The duration of symptoms varies from a few months to several years, but in most instances it is less than a year ⁴.

Breast tissue is remarkably resistant to TB. This is due to the fact that like skeletal muscles and spleen it provides an infertile environment for survival and multiplication of tubercle bacilli ⁷.

Breast involvement can be either primary without any extrapulmonary focus or secondary to pulmonary TB. The primary form of the disease is rare and probably occurs via lymphatic, hematogenous or contiguous spread. Lymphatic route is common and usually due to retrograde extension from cervical, mediastinal or mammary group of or may be via infection through skin abrasions or opening of the lactiferous ducts at the nipple. Axillary lymphadenopathy is reported in 50 – 75% ⁸.

Diagnosis is established by demonstration of AFB in breast tissue or pus specimen, but seen in only one fourth of the cases ⁹. FNAC can be diagnostic in about 75% of the patients with appearance of epithelioid granulomas or Langhans giant cells. Other types like core needle biopsy can get higher accuracy at diagnosis ⁷. Bacteriologic and histochemical studies of the sample may confirm definitive diagnosis by identifying presence of the bacillus, although culture and acid fast staining are negative in most of the cases.

Mammography or ultrasonography are not reliable in distinguishing breast TB from carcinoma because of variable pattern of presentations of such inflammatory lesion like coarse stromal texture with or without an ill-defined breast mass and skin thickening which all are not specific enough to aid diagnosis. ¹⁰

In our case the patient presented with lump in the breast which was hard in consistency with nipple retraction and overlying skin involvement masquerading as malignancy. She didn't have any focus of tuberculosis outside the breast, either on physical and radiological examinations. Hence breast may be considered to be primary site of infection. Cytological and histopathological examination helped in confirmation of the diagnosis.

Medical therapy is the mainstay of treatment with ATT. Although no specific guidelines are available for chemotherapy for tubercular mastitis, but 95 % success rate have been achieved in most studies with 6 months (2months HRZE/ 4 months HR) of antitubercular therapy. Some authors prefer 9 months regimen (2HRZE/7 months HR) due to lesser relapse rate. Surgical intervention was needed in upto 14% of the patients in some studies, may be due to lack of response to ATT or large painful ulcerative lesions involving the entire breast. Drainage of cold abscess in the axilla and breast

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to prevent sinus formation is mandatory. Simple mastectomy may be considered for patients with extensive disease comprising large painful ulcerative lesion involving the entire breast ^{11, 12}.

CONCLUSION: Tuberculosis of the breast is uncommon even in places with higher incidence of pulmonary or extrapulmonary TB. It is most often mistaken for carcinoma or pyogenic abscess due to difficulty in diagnosis even with radiological and microbiological investigations. Thus high index of suspicion is necessary in diagnosing the disease. Greater awareness of this uncommon entity of a common disease along with early institution of medical line of management with ATT may avoid surgery.

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**FIG. 1: Chronic non-healing ulcer over the left breast
With undermined edge, with nipple retraction**

**FIG. 2: Gross specimen of simple mastectomy with
tubercular ulcer (lump and multiple sinuses excised in
toto) and specimen of axillary lymphnode sampling**

**FIG. 3: HPE section from the breast lesion showing
characteristic Langhan's giant cell with multinucleated
horse nuclei**

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FIG. 4: Post-operative wound

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