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Case Report

Tuberculosis of breast: a rare case report

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ABSTRACT

Tuberculosis of the breast is an extremely rare extra pulmonary presentation of tuberculosis accounting for less than 1% of all diseases of the breast. It usually affects young lactating multiparous women, although it may also be reported in prepubescent males, or in elderly women. This rare condition can pose diagnostic difficulties and can mimic carcinoma breast or abscess. We report a case of a 42-year-old female patient with breast tuberculosis. We have reviewed this case in terms of clinical presentation, investigations, surgical treatment and antituberculous therapy and have shortly described our experience. Ultrasonography of breast, mammography and magnetic resonance imaging of breast supported the diagnosis of tuberculosis of breast. Wide local excision of the breast lump was done, and the excised specimen was sent for histopathological examination which confirmed the diagnosis of tuberculosis of breast. Antituberculous therapy was started post operatively. Post-operative period was uneventful. No active breast or pulmonary disease was present one year after surgery in chest computerized tomography scan. Possibility of this condition should be kept in mind in cases of breast carcinoma or abscess. Diagnosis is made by assessing a combination of clinical, radiological and pathological features. Treatment is mainly antituberculous therapy. Surgery is rarely required. A regular follow up is recommended to rule out recurrence of tuberculosis.

Keywords: Abscess, Extrapulmonary tuberculosis, Tuberculosis breast

INTRODUCTION

According to the recent WHO Global Tuberculosis Report, India accounts for nearly a quarter of the global TB burden, with approximately 2.8 million prevalent cases (prevalence rate 230 per 100,000) and 2.2 million incident cases every year.[1] Yet tuberculosis of breast is a rare extrapulmonary presentation of tuberculosis accounting for less than 1% of all diseases of the breast in the industrialized world.[2,3] In 1829, Sir Astley Cooper described TB mastitis as "scrofulous swelling" in the bosom of young women.[4]

It usually affects young lactating multiparous women, although it may also be reported in prepubescent males, or in elderly women.[5,6] Breast tuberculosis has no defined clinical manifestation and can resemble carcinoma or non-specific abscess and hence can be difficult to diagnose.[7] Author was report a case of a 42-year-old female patient who was diagnosed to have breast tuberculosis.

CASE REPORT

A 42-year-old female patient presented with a lump in her right breast for 1 year. History of fever with chills was present for 2 weeks. There was no history of pain or trauma over the lump site. There was history of significant weight loss. There was no family history of tuberculosis. Erythrocyte Sedimentation Rate (ESR) was

12 mm/h. On examination, a 5*4cm lump was present in the lower, inner quadrant of the right breast. There was no local rise of temperature and lump was non-tender. It was firm in consistency, mobile and had ill-defined margins. The nipple and areola complex were normal.

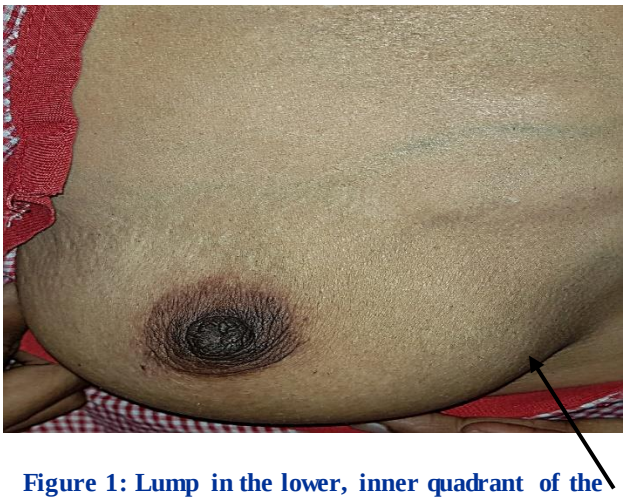

Figure 1: Lump in the lower, inner quadrant of the right breast.

Ultrasonography of the breast revealed a 5-cm solid, hypoechoic lesion with ill-defined margins. Mammography revealed a benign calcified lesion in the right breast with BIRADS ACR -3. Magnetic resonance imaging(MRI) of the breast revealed an ill-defined lesion in the right breast with peripheral rim enhancement Fine needle aspiration cytology(FNAC) from the lump in the right breast was suggestive of a pyogenic abscess. Wide local excision of the lump was done, and the specimen was sent for histopathological examination. The lesion was not attached to the pectoralis major muscle. Histopathology revealed epitheloid abscesses with Langhans' giant cells and central caseous necrosis. The patient had an uncomplicated postoperative course. The patient was treated with oral anti-tuberculosis therapy for 6 months postoperatively. No active breast or pulmonary disease was present one year after surgery in chest computerized tomography scan.

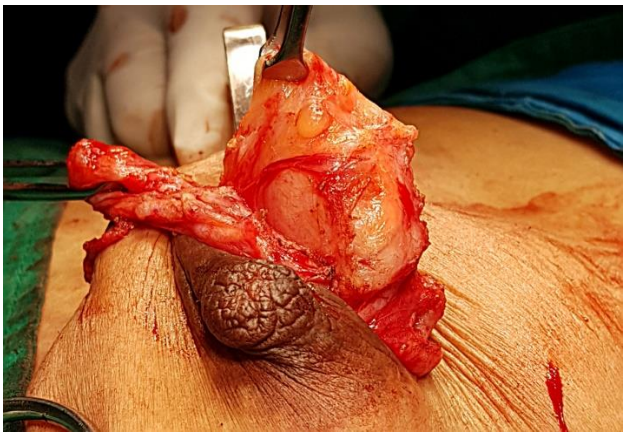

Figure 2: Wide local excision being done for the lump in the right breast.

Figure 3: Excised specimen of the right breast lump.

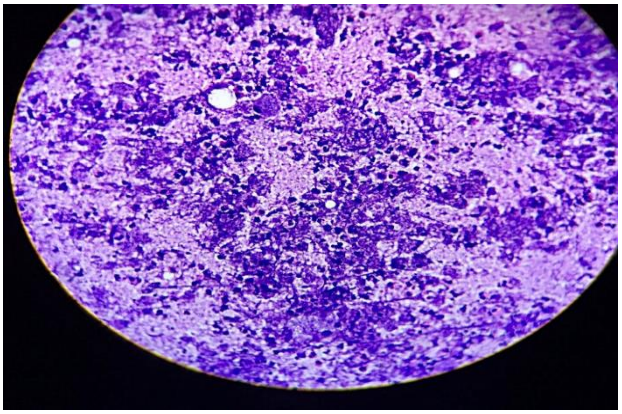

Figure 4: Histopathology of the excised specimen showing epitheloid cells with Langhans' giant cells and central caseous necrosis.

DISCUSSION

Tuberculosis of breast is an extremely rare condition because the mammary gland tissue, like the spleen and skeletal muscle, offers resistance to the survival and multiplication of the tubercle bacillus.[8] Tuberculous involvement of breast occurs either by direct inoculation of the bacilli through abrasions in the nipple, which is rare or more commonly via lymphatic, hematogenous, or contiguous seeding.[9,10] Breast tuberculosis commonly affects young multiparous, lactating women. Although cases have been reported from age 6 months to 73 years, most were between 20 to 40 years old.[11] The commonest clinical presentation is that of a lump, with or without a duct, with or without pain, most often located in the central or upper outer quadrant of the breast. The lump can mimic breast carcinoma, being hard, with irregular border, fixed to either the skin or the muscle or even to the chest wall.[12,13]

The most reliable and definitive diagnostic studies include aspirate culture, polymerase chain reaction for mycobacterium, and histological examination of the tissue sample. If in doubt, computed tomography scanning may be useful for the differentiation of primary and secondary lesions by detecting continuity with the thoracic wall or pleura, and associated lesions of the lungs.[14] Fine needle aspiration (FNAC) is the most widely

used initial invasive method for diagnosis of breast tuberculosis. Approximately 73% of the cases can be diagnosed on FNAC when both epithelioid cell granulomas and necrosis are present.[15,16]

At ultrasonography, a hypoechogenic mass is found in 60% of patients and the method may sometimes identify a fistula or a sinus tract which can be seen in cases of tuberculosis mastitis.[13] The gold standard for the diagnosis of breast tuberculosis is detection of *M. tuberculosis* by Ziehl Neelsen staining or by culture. However, histochemistry is not practical and culture of *M. tuberculosis* has limitations due to the delay in obtaining the final result and the possibility of false-negative results in paucibacillary samples.[8] Treatment of breast TB with standard antituberculosis therapy for 6 months usually results in good clinical response. The regimen consists of a 2 months intensive phase (isoniazid, rifampicin, pyrazinamide, and ethambutol) followed by a 4 months continuation phase (isoniazid and rifampicin).[17] Surgical intervention is required for aspiration of abscesses and excision of sinuses and masses. In resistant cases, simple mastectomy can be performed.[18]

CONCLUSION

Tuberculosis of breast is a rare condition which can pose diagnostic difficulties. It can mimic carcinoma of breast and breast abscess and hence should also be kept in mind as a possibility in cases of breast carcinoma or abscess. Antituberculous treatment is the mode of treatment.

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