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Case Report

Two cases of breast tuberculosis

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ABSTRACT

Breast tuberculosis is a rare type of extra-pulmonary tuberculosis. This paper reports 2 cases of breast tuberculosis confirmed histopathologically. Aim of this study is to increase awareness about this entity, as otherwise it may be missed and mistaken for breast carcinoma (which should of course always be considered or ruled out primarily).

Keywords: Breast tuberculosis, Extrapulmonary tuberculosis

INTRODUCTION

The first case of mammary tuberculosis was recorded by Sir Astlley Cooper in 1829 who called it scrofulous swelling of the bosom.[1] Breast tuberculosis is rare in western countries, the incidence being <0.1 percent of breast lesions examined histologically.[2] The incidence of tuberculosis in general is still quite high in India and the same is expected of breast tuberculosis too. But the disease is often overlooked and misdiagnosed as carcinoma or pyogenic abscess.[2] Breast tissue is remarkably resistant to tuberculosis. This is due to the fact that, like skeletal muscles and spleen, it provides an infertile environment for the survival and multiplication of tubercle bacilli. The breast may become infected in a variety of ways i) Hematogenous ii) Lymphatic iii) Spread from contiguous structures iv) Direct inoculation. Of these the most accepted view for spread of infection is centripetal lymphatic spread. Supporting this hypothesis was the fact that axillary lymph node involvement was shown to occur in 50 to 75 percent of cases of tubercular mastitis.[2] Breast tuberculosis affects women in the reproductive age. It is rare in males. Bilateral involvement is uncommon but one of our cases had bilateral involvement.[2]

CASE REPORT

Case 1 (Figure 1): A 40 year old female presented with a painful lump in her right breast in November 2014. On examination, the mass in the upper outer quadrant of the right breast was hard and tender, 5x3 cm in size. Axillary lymph nodes were not involved. She had a h/o removal of a left supra-clavicular lymph node 3 years earlier, which was painful. She had no past history of tuberculosis or family history of breast cancer. Mammography showed fibrocystic breast disease. USG-guided biopsy was suggestive of granulomatous mastitis, negative for AFB. Lumpectomy was done.

Histopathology showed a dense infiltrate of lymphoplasmacytic cells, neutrophils and epitheloid cells and scattered multinucleate and Langhans' type giant cells. ZN stain for AFB was positive suggestive of granulomatous mastitis of tuberculous etiology. Chest x-ray was normal. Anti-tuberculosis therapy was given for six months, but she developed an abscess in the same breast with pain and black discoloration of the skin. The abscess was drained and anti- tuberculous therapy was extended for two months. She responded to the treatment.

Figure 1: A 40 year old female presented with a painful lump in her right breast.

Case 2 (Figure 2): A 29 year old female presented with complaints of pain in the right breast that was aggravated during menses, followed by hardness in the same breast 2 months later that developed acutely. Two weeks later, she started getting pus discharge from the upper outer part of the breast. Sonography showed ill-defined multiple collections in the right breast, largest of size 13x10 cm in upper inner quadrant, suggestive of a developing abscess. Lumpectomy was performed and the histopathology was suggestive of "acute-on-chronic" granulomatous mastitis. She had two sinuses too and the breast was grossly disfigured. Three months after being investigated with the suspicion of cancer, she came to our hospital and was put on anti-tuberculosis therapy. After four and half months of treatment, she complained of an increase in pus discharge from the right as well as the left breast. The bilateral abscesses were drained and anti-tuberculosis therapy was continued. The sample was sent for CBNAAT exam but did not show drug resistance. After 16 months of anti-tuberculosis therapy, the ulcers completely healed. Anti-tuberculosis therapy was extended for one more month.

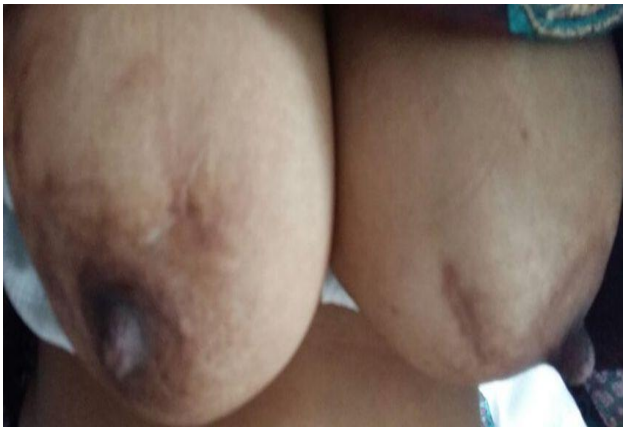

Figure 2: A 29 year old female presented with complaints of pain in the right breast that was aggravated during menses, followed by hardness in the same breast 2 months later that developed acutely.

DISCUSSION

Breast tuberculosis is relatively uncommon .Bilateral breast TB is even rarer. Lack of awareness of the disease leads to it being overlooked or misdiagnosed. Chronic and recurring abscesses, sinuses, lumps, absence of histopathological evidence of malignancy should suggest the possibility of tuberculosis of the breast. There are only a few reported cases of bilateral breast tuberculosis in India. Essentially, isolated breast TB is rare. It is usually associated with lymphadenitis. The reported incidence of isolated tuberculosis of the breast ranges from 0.10% to 0.52%.[3]

The new classification is:[2]

i. Nodulo-caseous tubercular mastitis.

ii. Disseminated/confluent tubercular mastitis.

iii. Tubercular breast abscess.

Breast TB usually affects young, lactating, multi-parous women though it also may occur in prepubescent males and elderly women.[4] In our study both the patients were in the reproductive age but not lactating. The first was a nurse and may have been exposed to patients of TB, the second did not give history of TB contact. Both were nutritionally well-maintained. According to one study the rate of involvement of the right and left sides was very similar with slight dominance of the left breast.[5] In our study one patient had TB in her right breast and one had bilateral involvement. In breast TB, the presenting signs and symptoms tend to be breast masses and an open wound accompanied by discharge. In our study breast masses were present in both the women, followed by two discharging sinuses in the second case.

The gold standard for the diagnosis of breast TB is the detection of M.tuberculosis by Ziehl-Neelson staining, or by culture. Radiological imaging modalities such as mammography or ultrasonography are unreliable in distinguishing breast TB from carcinoma because of the variable pattern of presentation. Culture or PCR is not very sensitive and this may cause some additional delays and under diagnosis.[4] In the present study the diagnostic tool used was histopathology following lumpectomy.

Therapeutic guidelines indicate that a six month regimen of anti-TB therapy is sufficient.[4] In the second case, since she was responding slowly, we continued anti-tuberculous therapy till she responded totally. Surgical intervention is indicated in cases that show poor response to anti TB therapy and it is used mainly to drain abscesses or the excision of residual lumps. Simple mastectomy is used for cases with extensive disease that causes a large, painful, ulcerated mass that involves the entire breast.[4] The second patient had been advised this surgery, which was the reason why she came in distress to this hospital for a second opinion. The discharging

sinuses, histopathology showing a chronic granulomatous lesion and absence of malignancy enabled the diagnosis of TB. She was a very cooperative patient who complied with the prolonged therapy. She has responded well to anti-tuberculous therapy that had to be extended as she developed recurrent abscesses.

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