

MANIFESTATIONS OF TUBERCULOSIS IN BREAST

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ABSTRACT:**Objective:** The aim of this study was to highlight the importance of tuberculosis as a cause of breast diseases.**Design & Duration:** Retrospective study from 2000 to 2005.**Setting:** This study was conducted at Sarfaraz Rafiquee Shaheed Hospital and Civil Hospital, Karachi.**Patients:** All patients who were diagnosed as cases of tuberculous mastitis were included in the study.**Methodology:** In all patients the biodata and a detailed history was taken and a thorough examination performed. Relevant investigations that were done included CP and ESR, X-ray Chest, Mammography, Mantoux Test, Sputum for acid fast bacilli, Discharge from sinuses for detection of acid fast bacilli and culture, Biopsy and histopathological examination. All patients underwent surgery with removal of the infected breast tissues, combined with anti-tuberculous chemotherapy.**Results:** A total of seven cases were detected during the study period with tuberculosis of the breast. All were females with an age range from 17 to 50 years, but the majority were under 30 years of age. The duration of their symptoms ranged from six months to two years. The main symptoms and signs were multiple discharging sinuses over the breast (n=3), painless lump (n=2), painful lump (n=1), ulcer (n=1), ipsilateral axillary lymphadenitis (n=3) and pulmonary tuberculosis (n=2). The diagnosis was made on histopathology in all the cases; six cases belonged to the nodular tuberculous group, while one had disseminated tuberculous mastitis. Acid fast bacilli were detected in only two specimen, while positive culture was obtained in only one patient. Successful outcome was seen following treatment comprising of anti-tuberculosis drug therapy with removal of the infected breast tissue in six and mastectomy in one patient.**Conclusion:** This study establishes the importance of including and remembering tuberculosis in the list of the causes of breast diseases, specially in cases of recurrent abscesses, sinuses and lumps.**KEY WORDS:** Tuberculosis, Breast, Mastitis, Recurrent Abscess, Sinuses**INTRODUCTION**

Tuberculosis of the breast is an extremely rare disease, only 500 cases of mammary tuberculosis have been documented, most of which are from the past generations¹. This is because the breast is remarkably resistant to tuberculosis, like the skeletal muscles and the spleen¹. Tuberculosis of the breast can mimic carcinoma, where as in the younger patients it can be mistaken for a pyo-

genic breast abscess². That is why it has been named as the "great masquerader", in recognition of its multifaceted presentation, and thus, the clinician may confuse tuberculous mastitis as the "scrofulous swelling in the bosom of young women"³.

Tuberculosis of the breast has been classified into five different types⁴:

- 1) Acute miliary tuberculous mastitis
- 2) Nodular tuberculous mastitis
- 3) Disseminated tuberculous mastitis
- 4) Sclerosing tuberculous mastitis
- 5) Tuberculous mastitis obliterans

It has also been classified into primary and secondary (to disease elsewhere), and there are three recognized modes of spread of tubercle bacilli to the breast: direct, lymphatic and haematogenous^{5,6}. Rarely, the infected

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sputum can reach the ducts, but spare the breast lobules. In 1829, Cooper postulated that the breasts get secondarily involved by retrograde lymphatic extension from the primary foci of diseases in the lymph nodes of the mediastinum, axilla, parasternal and cervical region⁷. Supporting this hypothesis is the fact that axillary node involvement occurs in 50 to 75% cases of the tuberculous mastitis. Vassilakos⁸ has also cautioned against making the diagnosis of primary tuberculosis of the breast, since it is probably quite rare and is diagnosed because the clinician is unable to detect the true nidus of disease.

PATIENTS & METHODS

This study was carried out retrospectively at Sarfaraz Rafiquee Shaheed Hospital and Civil Hospital, Karachi between 2001 and 2005 to find out the cases of tuberculosis of the breast, their presentation, treatment and the outcome.

The biodata of all these patients was recorded, as were the findings of a detailed history and a thorough examination. The investigations carried out included Blood CP and ESR, Blood sugar and urea, Serum creatinine and electrolytes, Sputum and any Discharge for AFB and culture, X-ray Chest, Mammography, Mantoux test and Biopsy with histopathology.

Surgery was performed in all the cases, together with antituberculous chemotherapy. The patients were followed-up to detect the outcome.

RESULTS

Seven cases of tuberculosis of the breast were detected during the study period. All were females with an age range from 17 to 50 years; majority were however seen under 30 years of age. The duration of their symptoms ranged from six months to two years. The main clinical features noted being multiple discharging sinuses over the breast in three patients, painless lump in the breast in two, painful and tender breast lump in one case, and an ulcer also in one case. Three patients had ipsilateral axillary lymphadenitis while two had pulmonary tuberculosis also.

The diagnosis was mainly made on histopathology in all the cases; six cases belonged to nodular tuberculous group, while one had disseminated tuberculous mastitis. Acid fast bacilli were detected in only two specimen, whereas positive culture for tuberculosis was obtained in one patient only. All the patients recovered following excision of the involved breast tissue in six and mastectomy in one case, alongwith treatment with anti-tubercular drug therapy.

DISCUSSION

Out of the seven cases in this series, tuberculosis in the breast was secondary in two cases, as they had pulmonary tuberculosis as well. In the remaining five (71%) cases as no lesion was traceable elsewhere, except that in the breast itself, hence they can be presumed to be cases of primary tuberculosis. According to Hamit¹ also, in 60 percent of cases it may not be possible to recover acid fast bacilli from any site, but the breast. Acid fast bacilli were recovered from only two cases in our series, an incidence similar to that reported by Morgen⁹. In our series ipsilateral axillary lymph nodes were involved in three (43%) cases. Other studies also describe a 50 to 75 percent involvement of the axillary nodes in cases of tuberculous mastitis⁷.

The tubercle bacilli can reach the breast either directly or through the lymphatic and the haematogenous channels^{5,6}. Rarely, infected sputum can reach the ducts, but spare the lobules. Dilated lactiferous ducts in lactating women appear to be especially susceptible to infection⁴. Retrograde spread of infection from lymph nodes to the breast was observed in one of our patients, in whom axillary lymphadenopathy preceeded the appearance of a breast mass.

Early diagnosis of breast tuberculosis is difficult, as the characteristics sinuses occur late in the course of the disease. In addition, presence of these sinuses is not the distinctive feature of tuberculosis, as several cases of non-tuberculosis granulomatous mastitis may also present with sinuses¹⁰. However, tuberculosis should be suspected in a patient who has a recurring breast abscess after adequate drainage on previous occasions. Multiple biopsies and detection of acid fast bacilli in wet film and culture is essential to establish the final diagnosis.

The patient of tuberculous mastitis who present with a lump in the breast is clinically indistinguishable from the case of a carcinoma of the breast. Mammographic appearances are very similar to that of fibroadenosis. In clinical presentation, actinomycosis must also be considered, though this disease is rare in the breast.

Before the discovery of anti-tuberculous drugs, surgeons used to perform mastectomies for mammary tuberculosis. Wilson and Macgregor⁷ recommended simple mastectomy for most cases due to the developmen of local recurrence in three of their five patients following less severe procedures. However, today the combination of drug therapy and limited excision of the diseased breast tissue is a method of choice^{5,6}. In our series, anti-tubercular chemotherapy was given to all the seven cases, together with excision of the necrotic tissue and drain-

age of the abscess in six cases. In one case a simple mastectomy was performed in combination with anti-tubercular drug therapy.

CONCLUSION

Tuberculosis of the breast is a rare condition. However, it should be remembered and considered in the differential diagnosis of breast diseases, especially in cases presenting with lumps, sinuses and recurring abscesses.

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