Scholars Journal of Medical Case Reports **ISSN 2347- 6559 (Online)**
Sch J Med Case Rep 2013; 1(3):98-100 **ISSN 2347- 9507 (Print)**

(An International Publisher for Academic and Scientific Resources) DOI: 10.36347/sjmcr.2013.v01i03.014

Tuberculous Mastitis: A Case Report

Dr. Swarnagowri B.N.
Professor, Department of Pathology, Dr. B. R. Ambedkar Medical College,Bangalore -560045, India

***Corresponding Author:**
Name: Dr. Swarnagowri B.N.
Email: swarnagowri@ymail.com

Abstract: Breast tuberculosis is a rare form of tuberculosis. This is a mistaken identity with breast cancer and pyogenic breast abscess. The incidence of tubercular mastitis although decreasing in the West, could show resurgence with the global pandemic of AIDS. Breast tuberculosis has no defined clinical features. Radiological imaging is not diagnostic. Diagnosis is based on identification of typical histological features or the tubercle bacilli under microscopy or culture. Here we discuss unusual presentation of tuberculosis without active pulmonary component.
Keywords: Breast Tuberculosis, Granulomatous Mastitis

INTRODUCTION

In developing countries, where tuberculosis is endemic, the incidence is 0.25-4.5% [1]. Breast tuberculosis is rare in the western countries, incidence being <0.1 per cent of breast lesions examined histologically [2, 3]. The incidence of tuberculosis, in general, is still quite high in India and so is expected of the breast tuberculosis. The first 13 cases of breast tuberculosis from India were reported by Chaudhury in 1957[4] from 433 breast lesions studied by her. Several Indian series reported the incidence of breast tuberculosis amongst the total number of mammary conditions to vary between 0.64 and 3.59 per cent [5,6].

CASE REPORT

A 31 year old lady presented with h/o mobile mass in the breast for 5 months.Her laboratory routine investigations were within normal limits. There was no pulmonary component. FNAC was performed.

The aspiration yielded cheesy material. The smears showed groups of lymphocytes along with epithelioid cells and Langhans giant cel (fig. 1).

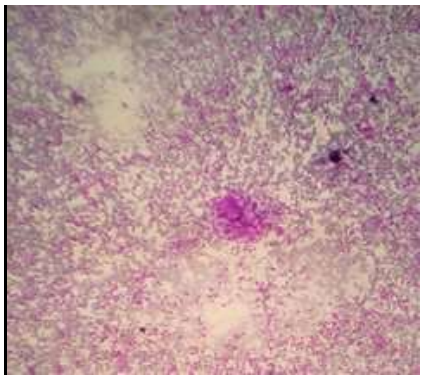

Fig.1: (10X)-FNAC Smear shows epithelioid cells and Langhans giant cell

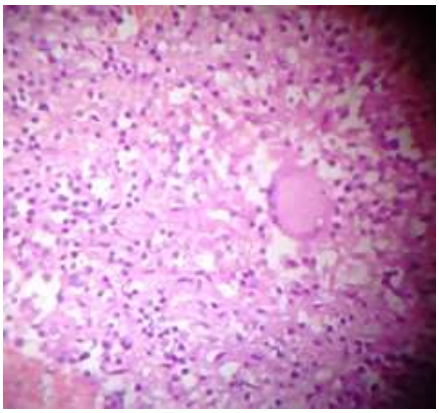

Fig. 2: (40x) Tissue section shows epithelioid granuloma

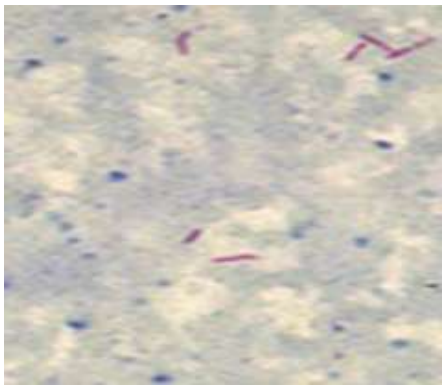

Fig. 3: (100x) Acid fast bacilli –red & rod shaped

The same lesion was operated and sent for histopathological examination. The sections revealed epithelioid granuloma with Langhans giant cells and caseating necrosis (fig. 2).The tissue was subjected for AFB stain, which showed red rod shaped Mycobacterium tubercle bacilli (fig. 3).A diagnosis of Tuberculous mastitis was made.

DISCUSSION

Breast tissue is remarkably resistant to tuberculosis. This is due to the fact that, like skeletal muscles and spleen, it provides infertile environment for the survival and multiplication of tubercle bacilli [6]. McKeown and Wilkinson classified breast tuberculosis as primary when the breast lesion was the only manifestation of tuberculosis, and secondary when there was a demonstrable focus of tuberculosis elsewhere in the body [7]. However, Vassilakos [8] stated that primary breast tuberculosis was probably quite rare and was diagnosed because the clinician was unable to detect the true focus of the disease. Later on, breast tuberculosis was considered invariably secondary to a lesion elsewhere in the body. Primary form may rarely result from infection of the breast through abrasions or through openings of the ducts in the nipple.The breast may become infected in a variety of ways[7] e.g., (i) haematogenous, (ii) lymphatic, (iii) spread from contiguous structures, (iv) direct inoculation, and (v) ductal infection. Of these, the most accepted view for spread of infection is centripetal lymphatic spread [6]. The path of spread of the disease from lungs to breast tissue was traced via tracheobronchial, paratracheal, mediastinal lymph trunk and internal mammary nodes [7]. According to the Cooper's theory, communication between the axillary glands and the breast results in secondary involvement of the breast by retrograde lymphatic extension [9]. Supporting this hypothesis was the fact that axillary node involvement was shown to occur in50 to 75 per cent of cases of tubercular mastitis[10].Breast is resistant to tuberculous infection by blood stream, even in debilitated patients of tuberculosis [7].Occasionally, direct extension from contiguous structures such as infected rib, costochondral cartilage, sternum, shoulder joint and even through the chest wall from a tuberculous pleurisy or via abrasions in the skin can occur [11, 12].

Classification of breast tuberculosis: Breasttuberculosis was first classified into five different types by Mckeown and Wilkinson [7]: (i) Nodular tubercular mastitis, (ii) Disseminated or confluenttubercular mastitis, (iii) Sclerosing tubercular mastitis, (iv) Tuberculous mastitis obliterans, and (v) Acute miliary tubercular mastitis. Since then this classification has been followed though the clinicalscenario of breast tuberculosis has gradually changed over the years.There are three clinical varieties of mammary TB - namely, nodular, sclerosing, and disseminated [1]. The nodular variant is often mistaken for a fibroadenoma or carcinoma and is the commonest accounting for 60% of cases. The disseminated variety commonly leads to caseation and sinus formation. Sclerosing TB affects older women and is slow growing with absence of suppuration.

The nodulocaseous form of breast tuberculosis presents as a well circumscribed, slowly growing painless mass that progresses to involve the overlying skin, may ulcerate, form sinuses and may become painful. In early stage it is difficult to differentiate from a fibro adenoma, while at later stages it mimics a carcinoma [13, 14]. Few reports described disseminated form of breast tuberculosis [10, 11]. It is characterized by multiple foci throughout the breast that later caseate leading to sinus formation. The overlying skin is thickened and stretched with or without painful ulcers. The breast may be tense and tender. The draining axillary lymph nodes are enlarged and matted [12]. The sclerosing variety finds mention in old literature usually affecting involuting breasts of older females. Excessive fibrosis rather than caseation is the dominating feature. There is a hard painless slow growing lump with nipple retraction. Suppuration is rare. It may be misdiagnosed as a scirrhoticcarcinoma [12]. Often the entire breast becomes hard because of dense fibrous tissue.Tuberculous mastitis obliterans as described by Mckeown and Wilkinson [7] is characterized by duct infection producing proliferation of lining epithelium and marked epithelial and periductal fibrosis. The ducts are occluded and cystic spaces are produced resembling 'cystic mastitis'. In acute military tubercular mastitis breast disease is a part of a generalized miliary tuberculosis.

Histologically, tubercular mastitis is a form of granulomatous inflammation. There are many other conditions that are characterized histologically by a tuberculoid type of tissue reaction. These conditions include sarcoidosis, various fungal infections, and granulomatous reactions to altered fatty material. Sometimes the microscopical picture is indistinguishable from that of tuberculosis [11]. Breast tuberculosis versus carcinoma breast: Clinical examination often fails to differentiate carcinoma breast from tuberculosis and high index of suspicion is necessary. Factors predictive but not diagnostic of breast tuberculosis include constitutional symptoms, mobile breast lump, multiple sinuses, and an intact nipple and areola in young, multiparous or lactating females [12]. Nipple retraction, peaud'orange, and involvement of axillary lymph nodes are more common in malignancy than in tuberculosis. Histopathology can differentiate granulomatous mastitis due to predominantly lobular granulomas and absence of caseous necrosis, compared to tuberculous mastitis which usually centres around ducts rather than lobules.

CONCLUSION

A painless lump or a non-healing ulcer in the breast accompanied by a history of generalized weakness, weight loss and low grade fever are the common presentations of tuberculous mastitis. Early diagnosis based on clinical features and supplemented by FNAC is suggested. Histopathology examination accompanied by AFB stain to demonstrate bacilli can be conclusive. Culture would take a long time. If the

patient can afford the cost PCR would be the ultimate diagnostic aid.

REFERENCES

1. Kaneria MV, Sharbidre P, Burkule D, Shukla A, Somani. A, Nabar S; Bilateral breast tuberculosis: A rare entity. JIACM, 2006; 7:61–63.
2. O'Reilly M, Patel KR, Cummins R; Tuberculosis of the breast presenting as carcinoma. Mil Med., 2000; 165(10): 800-802.
3. Al-Marri MR, Almosleh A, Almoslmani Y; Primary tuberculosis of the breast in Qatar: ten year experience and review of the literature. Eur J Surg., 2000; 166(9): 687-690.
4. Chaudhary M; Tuberculosis of the breast. Br J Dis Chest, 1957; 51: 195-199.
5. Dharkar RS, Kanhere MH, Vaishya ND, Baisarya AK; Tuberculosis of the breast. J Indian Med Assoc., 1968; 50:207-209.
6. Mukerjee P, George M, Maheshwari HB, Rao CP; Tuberculosis of the breast. J Indian Med Assoc., 1974; 62: 410-412.
7. Mckeown KC, Wilkinson KW; Tuberculous diseases of the breast. Br J Surg., 1952; 39(157):420.
8. Vassilakos P; Tuberculosis of the breast: cytological findings with fine-needle aspiration. A case clinically and radiologically mimicking carcinoma. ActaCytol., 1973; 17(2): 160-165.
9. Domingo C, Ruiz J, Roig J, Texido A, Aguilar X, Morera J. Tuberculosis of the breast: A rare modern disease. Tubercle. 1990;71(3): 221–223.
10. Sharma PK, Babel AL, Yadav SS; Tuberculosis of breast (study of 7 cases). J Postgrad Med., 1991; 37(1): 24-26.
11. Symmers St. WC editor; The Breasts. In Systemic pathology. 2nd edition, volume 4, New York: Churchill.
12. Shinde SR, Chandawarkar RY, Deshmukh SP; Tuberculosis of the breast masquerading as carcinoma: a study of 100 patients. World J Surg., 1995; 19(3): 379-381.
13. Graunsman RI, Goldman ML; Tuberculosis of the breastreport of nine cases including two cases of co-existing carcinoma and tuberculosis. Am J Surg., 1945; 67(1): 48-56.
14. Inoue Y, Nishi M, Hirose T; Tuberculosis of the breast – a case which could not be mammographically distinguished from breast cancer. Rinsho Hoshasen, 1986; 31(2): 321-322.