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Tubercular Mastitis: A Rare Case Report

Author: xxx

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ABSTRACT: Tuberculous mastitis is an uncommon disease, usually affects women from the Indian subcontinent and Africa. The significance of breast TB is due to its rare occurrence and its resemblance to malignant breast lesions. Fine needle aspiration cytology (FNAC) is a very essential diagnostic tool when other routine laboratory investigations are not helpful in reaching to the conclusion. In subjects coming from endemic areas, it is necessary to suspect a tuberculosis infection in case of recurrent mastitis refractory to antibiotics. Treatment with standard antitubercular drugs was associated with complete resolution of the lesion.

Conclusions: Breast TB should be considered in the differential diagnosis in the presence of a painful breast mass, discharging sinuses, mastitis, or a breast abscess that does not respond to conventional medical treatment. A multidisciplinary approach is required to aid timely diagnosis and to provide appropriate management and treatment in order to avoid complications.

KEY WORDS: Tuberculosis, Mastitis, Mycobacterium tuberculosis

I. INTRODUCTION

Tuberculosis of breast was first documented by Sir Astley Cooper in 1829 [1,2].

The incidence of breast tuberculosis is estimated to be 0.1% of breast diseases in developed countries, but it reaches 3%- 4% in countries where tuberculosis is endemic[6,7,8].Mammary tuberculosis mostly appears in multiparous, lactating women and in association with immunosuppressive disorders, including HIV[9,10]. The diagnosis can be difficult because the disease may mimic breast carcinoma, pyogenic abscess, and other granulomatous diseases[11,12].

There are three clinical types of mammary tuberculosis namely: nodular, disseminated, and sclerosing [17]. The nodular variant is often mistaken for a fibroadenoma or carcinoma. The disseminated variety usually presents as caseation and sinus formation. Sclerosing tuberculosis is slow growing without suppuration and usually affects older women. Patients presenting with a breast lump associated with discharging sinuses are easily diagnosed but need to be differentiated from actinomycosis by the absence of sulphur granules in the discharge and by fungal culture. The isolated breast lump without sinuses mimics carcinoma as the lump is usually ill defined, irregular, and occasionally hard. Pain in the tuberculous lump is present more frequently than in carcinoma. Involvement of the nipple and areola is rare in tuberculosis. Due to proximity of the axillary nodes, upper outer quadrant of breast is the most frequently involved site, though any area of the breast can be involved. Constitutional symptoms and pulmonary tuberculosis were found associated in only few of the patients. Tuberculous mastitis can be diagnosed reliably by cytological evidence of epithelioid granulomas, Langhans' giant cells, and lymphohistocytic aggregates. Mammography, ultrasonography and Gd-DTPAenhanced dynamic MRI have also been used to diagnose tubercular mastitis [18]. Mammographic findings include a mass, calcification, asymmetric density with spiculated margins and axillary node enlargement. On ultrasonography, a smooth bordered mass with thin boundary and heterogeneous, intermediate internal echoes are most commonly demonstrated. On Gd-DTPA enhanced dynamic MRI, almost half of the lesions show a significant enhancement at the first minute after injection. The enhancing pattern is usually a smooth or irregular ring appearance. However, the demonstration of acid-fast bacilli on Ziehl Neelsen (ZN) stain or growth of M. tuberculosis on culture of the tissue specimen remains the gold standard for diagnosis [16]. Earlier, the treatment modality used to be exclusively surgical resection of the infected tissue, but now antitubercular chemotherapy supplemented by limited surgery or aspiration of abscesses [14,15] is considered adequate treatment.

II. CASE PRESENTATION

A 40-year-old female was admitted in surgical ward at new medical college and hospital kota, with chief complaint of right breast lump for 4 months. Breast lump was associated with distention of abdomen, other associated history was loss of appetite for 3 months and occasional difficulty in breathing and cough with sputum.The patient had taken oral antibiotic therapy for 2 weeks. Her general examination was within normal

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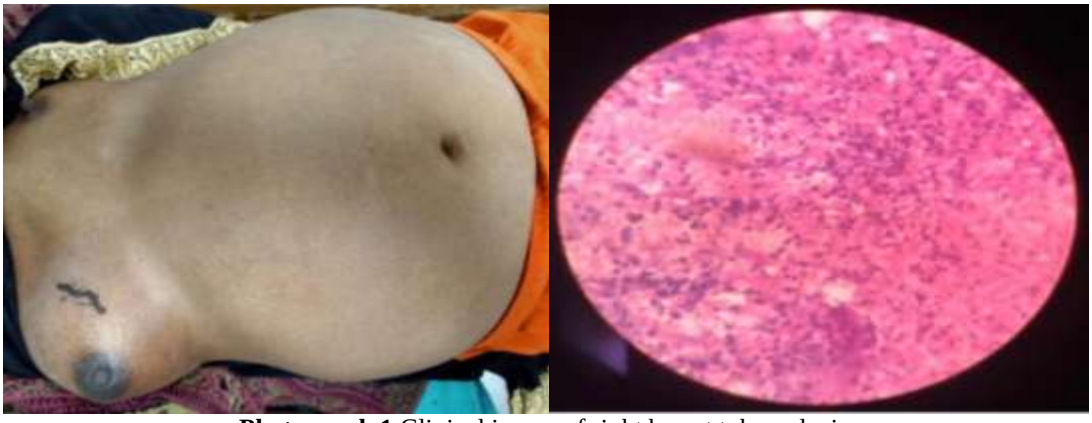
limits. No significant menstrual irregularity present.

On examination breast lump was irregular and well defined, non-tender involving upper and lower outer quadrant. Axillary lymphadenopathy was noted. Swelling was non-tender, non-movable and fixed to chest wall, overlying skin has no ulceration and satellite nodule. Abdominal examination; it was soft distended and non-tender, on percussion there was dull and tympanic notes present, along with presence of fluid thrill.

Clinical investigation

In routine hemogram TLC was increased with raised lymphocyte count. Hemogram has slightly decreased suggestive of anemia. X ray chest showed linear opacity with prominent bronchovesicular markings. FNAC of lump showed multiple granulomas composed of epithelioid cells & Langhans giant cells surrounded by lymphocytes along with foci of caseous necrosis. Smear showed abundance of mixed inflammatory infiltrate predominantly lymphocytes, plasma cells and epithelioid cells in background of caseous necrotic material with abundance of polymorphonuclear cells, suggestive of chronic granulomatous mastitis. Ascitic tap has done and sent for cytology. It shows evidence of mononuclear cells predominantly lymphocytes, plasma cells, histocyte and epithelioid cells, few foamy macrophages and multinucleated giant cells were also seen suggestive of tubercular exudate.



Photograph 1 Clinical image of right breast tuberculosis.
Photograph 2 caseating granuloma with many Langerhans giant cells

III. DISCUSSION

Breast and skin are considered to be rare sites of extrapulmonary mycobacterial infection comprising 0.1 - 0.5 % of all cases of tuberculosis [3].The age incidence is between 20 - 50 years (reproductive age group)[1,2,3]. The various risk factors considered to be associated with tuberculous mastitis are multiparity, lactation, trauma, immunosuppression, past history of suppurative mastitis, pulmonary tuberculosis and tuberculous lymphadenitis involving the cervical, axillary or mediastinal nodes [1,3,4]. Breast lump is the most common presenting symptom, nipple and areola are rarely involved. Pain is more frequent than carcinoma. Skin involvement is frequent. Enlargement of regional lymph node is seen. Mammography can't distinguish this from carcinoma.

Tuberculosis of breast usually secondary and primary lesion present anywhere in the body. Lymphatic spread from pulmonary is a possibility, hematogenous spread from the other body parts can also take place.

The histopathological differential diagnosis of tuberculosis of breast includes other infections, sarcoidosis and granulomatous reaction to tumour. In breast tuberculosis, acid fast bacilli are identified in only 12% of patients. Hence, demonstration of caseating granulomas and Langhans giant cells in the breast tissue and involved lymph nodes may be sufficient for diagnosis[5]. In the diagnosis, mammography has low sensitivity. Ultrasound can show a hypoechoic mass in 60% of patients, focal or sectorial duct ectasia in 40%[13]. The gold standard for the diagnosis is detection of M. tuberculosis by Ziehl-Neelsen staining or by culture.FNAC now first choice for diagnosis tubercular mastitis and nearly 73% of breast TB cases can be confirm diagnosed with FNAC. Tubercular ascites is usually presentation of abdominal tuberculosis. In ascitic fluid of patients of tuberculosis lymphocytes predominant.

Diagnosis of above case confirmed as tubercular ascites due to tubercular mastitis in primary pulmonary tuberculosis.

Patient was managed conservatively for above condition; she was kept on ATT for required duration and had shown significant improvement.

IV. CONCLUSION

Breast tuberculosis should be considered in the differential diagnosis of any case of clinically painful or painless breast mass, breast abscess or carcinoma in a female in the reproductive age group especially in an endemic country like ours.

CONFLICT OF INTEREST

None declared.

REFERENCES

[1]. Prem Parkash Gupta, KB Gupta, Rohtas K Yadav and Dipti Agarval. Tuberculous mastitis: a review of seven consecutive cases. Ind J Tub 2003; 50: 47.
[2]. DR Nagpaul. Breast tuberculosis. Ind J Tub III (1): 15-19.
[3]. Donya Farrokh, Fariba Rezaii Talab, Yalda Fallah Rastegar. Primary breast tuberculosis mimicking carcinoma: a case report. Iranian Journal of Clinical Infectious Diseases 2010; 5(4): 242-245.
[4]. R Khanna, GV Prasanna, P Gupta, M Kumar, S Khanna, AK Khanna. Mammary tuberculosis: report on 52 cases. Postgrad Med J 2002; 78(921): 422424.
[5]. Leo Francis Tauro, John S. Martis, Celine George, Aroon Kamath, Geover Lobo, B. Rathnakar Hegde. Tuberculous Mastitis Presenting as Breast Abscess. Oman Med J 2011; 26(1): 53-55.
[6]. Hale JA, Peters GN, Cheek JH. Tuberculosis of the breast: rare but still exist. Review of the literature and report of an additional case. Am J Surg. 1985;150:620-624.
[7]. Al-Marri MR, Almosleh A, Almoslmani Y. Primary tuberculosis of the breat in Qatar: ten year experience and reiew of the literature. Eur J Surg. 2000;166:687-690.
[8]. Kalac N, Ozkan B, Bayiz H. Brest tuberculosis. Breast. 2002;11:346-349.
[9]. Tewari M, Shukla HS. Breast tuberculosis: diagnosis, clinical features, and management. Indian J Med Res. 2005;122:103-110.
[10]. Hartestein M, Leaf HL. Tuberculosis of the breast as a presenting manifestation of AIDS. Clin Infect. Dis. 1992;15:692-693.
[11]. Morino GF, Rizzardi G, Gobbi F, Baldan M. Breast tuberculosis mimicking other diseases. Trop Doct. 2007;37:177-178.
[12]. Borens-Fefer B, Engohan-Aloghe C, Noël JC, Simon P, Bucella D, Boutemy R. Primary mammary tuberculosis presenting as voluminous abscess. JBR-BTR. 2008;91:54-57.
[13]. Sakr AA, Fawzy RK, Fadaly G, Baky MA. Mammographic and sonographic features of tuberculous mastitis. Eur J Radiol. 2004;51:54-60.
[14]. Wilson .IP, Chapman SW. Tuberculous mastitis.Chest 1990; 98: 1505.
[15]. Gilbert AL McGough EC. Farrell JJ. Tuberculosis of the breast. Am J Surg 1962; 103:424?
[16]. Kakker S, Kapila K, Singh MK, et al. Tuberculosis of the breast. A cytomorphologic study. Acta Cytol 2000; 44:292–6.
[17]. Goksoy E, Duren M, Durgun V, et al. Tuberculosis of the breast. Eur J Surg 1995; 161:471–3.
[18]. Wilson TS. MacGregor,! W. The diagnosis and treatment of tuberculosis of the breast. Can Med Assoc J 1963; 89:1118