

Tuberculous Mastitis

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Introduction:

Pakistan is one of the countries where tuberculosis is still endemic and ranks 5th among TB burden countries. Extra-pulmonary TB accounts for 21% of all TB cases. Most common Extra-pulmonary TB sites include lymphatics, Pleural, Bone or joints, peritoneal, meningeal and genitourinary. Breast and Skin forms the rarest form. TB Mastitis accounts b/w 0.025- 0.3 % of breast diseases in industrialized nations whereas 3-5 % incidence in TB endemic regions.¹ SIR Astely Cooper First reported case of TB Mastitis in 1829.² Primary TB Mastitis is rare. It usually affects women in their reproductive age, especially during lactation. Clinical Presentation of TB Mastitis is variable and may mimic as pyogenic breast abscess or carcinoma breast. It needs high index of suspicion to diagnose TB Mastitis when typical constitutional features are absent, only found in 20% of patients.

Mammography and Ultrasonography are of little value while FNAC often is inconclusive. Radiological modalities, computed-tomography/ MRI and Histopathology plays a significant role in its diagnosis. TB Mastitis responds well to Anti Tuberculous therapy, therefore Surgery is reserved only for refractory cases.

We present here a case of a married middle age lady misdiagnosed as a case of pyogenic breast abscess turned out to be TB Mastitis

Case Report:

56 yr old female Muslim married, P⁴⁺⁰, attended the OPD with the presentation of multiple discharging swelling on neck & bilateral breast. It started 3 years back with a single painful swelling in right lower neck without any constitutional symptoms regressed spontaneously with home remedy in one month. Latter after one month another painful swelling appeared in left upper neck, this time associated with non-foul smelling yellowish pus discharge. Over the course of time she has developed several painful swellings in and over the neck & bilateral breast, with yellow pus and blood discharge. Sometimes remit by itself, when swelling burst and pus evacuates, at other times with use of antibiotics leaving behind multiple scars. She has

breastfed all her children for at least 1 ½ years. She has never use OCP's for contraception and currently menopause for 8 years. She has a family history of carcinoma of breast but denies any tuberculosis in family or history of breast trauma. Examination reveals multiple scars of variable size around the neck extending over the lateral chest wall bilaterally and over the bilateral breast with sinus tracts, few of them discharging pus and blood. No obvious mass felt but bilateral nipples were deformed and retracted due to scarring. Both breast were tender and there was no nipple discharge. Right axillary lymph nodes were palpable.

CXR was normal. ESR was 50mm. On U/S Multiple hypo echoic areas were seen in whole

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Fig.1: Multiple sinuses with significant skin scarring & distorted nipples in bilateral breast



Fig.2: MRI T2 image showing multiple abscesses in bilateral breast with sinus

of right and left breasts measuring 10.0 * 8.0mm and 14.0 * 6.7 mm respectively suggesting an inflammatory / breast abscess. CT Chest and bilateral breast showed multiple hypo dense areas in both breast. Some of them show slightly thick enhancing peripheral walls. One of them measures about 7.8x2.0cm. Some of them are reaching up to the skin causing slight thickening of overlying skin. Few Axillary lymph nodes seen, largest one 1.7 * 1.0 cm in right axilla. Neoplastic lesion was not ruled out.

Incisional Biopsy was done that confirmed chronic caseating granulomatous lesion.

ATT (Myrin P forte and Vita 6) was started according to local protocols. Symptomatically patient has improved and since the ATT started 4 months back no new swelling or sinuses has appeared. Patient is being followed up regularly in OPD

Discussion:

Tuberculosis is an endemic disease in South Asia

but isolated TB Mastitis cases are rarely reported. Breast, skeletal muscles and spleen appears to be resistant to mycobacterium TB. It has been postulated that during lactation in multiparous females; due to high vascularity and changes in breast parenchyma may harbour and allow multiplication of mycobacterium TB. It accounts for only 0.025-0.3 % of all breast diseases but prevalence may be higher in endemic areas.¹

TB Mastitis can be primary when no other focus of Tuberculosis is identified. Most common route of dissemination are lymphatics, hematogenous, direct extension from underlying infected rib, pleura or cervical/axillary lymph nodes. However many authors argues TB mastitis to be always secondary even if primary location of inoculation is unidentified. There are three clinical varieties of TB Mastitis identified namely nodular, sclerosing and disseminated. Nodular is the most common with 60% cases and can be mistaken for Fibroadenoma or carcinoma breast. Disseminated variety presents itself as multiple sinuses and caseation. In sclerosing there is absence of suppuration and affects old age group.

TB Mastitis usually infects young or middle aged multiparous, lactating females rarely males. In our case the lady was non-lactating mother and was menopausal for over a year. Few cases reported previously in postmenopausal age.

Mean Duration of age of patients with TB Mastitis is 32.4 yrs as reported by Mehraver from Iran but in our case it was 56yrs. Mean Duration of symptoms as reported by Mehraver, khana et al is 8.5 months whereas Tiwari reported it to 9.4 months.^{3,4,5} Sharma found duration of symptoms upto 2yrs. But our patient came to us after 36 months of symptoms. It may be due to diagnostic delay and presumably being treated as pyogenic breast abscess with non-TB antibiotics resulting in high morbidity.⁶

Shinde et al description of presenting symptoms were painful lump with or without ulceration. Our patient presented with diffuse nodularity involving both breast with multiple sinuses and concomitant axillary lymphadenopathy with

overlying skin scarring. Shinde also reported axillary lymphadenopathy in up to one third of cases.⁷

Most of the cases reported in literature are of unilateral TB Mastitis equally involving both breast at a time, only 9% of the cases of TB Mastitis are bilateral as reported by Mehraver in a retrospective analysis of 22 patients. Our Patient presented with multiple sinus openings over bilateral breast extending into the neck with skin scarring.³

The Gold standard method in diagnosis of TB Mastitis is inoculation of Mycobacterium TB by Zeil Nelson staining or by Culture.¹¹ Cultures results in diagnostic delays only found positive in 30 % cases while FNAC was found to be positive in 12-22.7% of cases. Ultrasound and MRI may mimic findings of carcinoma breast due to variable presentations of granulomatous inflammatory lesion. The most common radiological findings were breast abscesses and axillary lymph nodes. PCR, considered highly sensitive investigation nowadays but seldomly used for diagnosing TB Mastitis. It should be of good option in patients with cultures / FNAC yielding negative results but presentation and clinical suspicion is high. The most frequently reported diagnostic modality was excisional / incisional biopsy with promising results of 81.81%. Al-Mari et al also recommends excisional / incisional biopsy for diagnosing suspected cases where histopathology identifies chronic granulomatous inflammation with caseous necrosis and langhen giant cells diagnostic of TB.⁸

Recommended treatment with anti-tuberculous drugs for 6-9 month has been report in various studies. But 6 months treatment yields optimal outcomes. Daali et al and Mirsaeidi et al recommends 9 months of ATT chemotherapy In endemic and resistant cases.^{9,10} Shinde et al reported 14% of patients needing simple mastectomy with / without axillary clearance either due to lack of ATT response or large ulcerative lesions involving entire breast (4%). It may be needed to drain abscesses and excision of fistulous tracts in refractory cases.⁷ We also recommend

9 months of ATT drugs in our population as burden of tuberculosis is very high in our society.

Conclusion:

TB should be considered a one of the differential diagnosis in refractory cases of breast abscesses not responding to routine antibiotics or other inflammatory breast lesions and tumours. Usually TB Mastitis is a diagnosis of exclusion. Diagnostic delay results in high morbidity, therefore, trial of ATT drugs can be given in patients with high risk of suspicion. Simple mastectomy is usually not needed, only reserved for persistent residual infection.

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Role and contribution of Authors:

Dr Lubna Habib, FCPS, Professor and Consultant Surgeon, Hamdard University Hospital, supervised throughout the case.

Dr Muhammad Farrukh Adil, FCPS-II trainee in General Surgery, fourth year resident, Hamdard University Hospital,

Dr Zara Zahid, FCPS-II trainee in General Surgery, second year resident, Hamdard University Hospital, helped in literature search and patients followups.

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