



Pulmonary Koch's Defaulter Presenting as Breast Lump: A Diagnostic Dilemma

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ABSTRACT

Introduction: Tuberculosis is wisely said to be a great mimicker. Because of ability to have myriad presentations it is often said to be often present as one of the differentials in most of enigmatic cases with dubious or non-conspicuous diagnoses. Pulmonary Koch's defaulter presenting as granulomatous mastitis secondary to pulmonary tubercular abscess is an uncommon presentation that posed as a diagnostic dilemma in the index case.

Case presentation: 50 year rural women presented in outdoor with complaints of slightly painful right sided breast lump for more than six months. There was no history of trauma, Diabetes Mellitus (DM), Hypertension (HTN), any previous lump, any previous surgeries, any history of malignancies or breast lumps in family. Patient had been treated for persistent cough at her native village. Patient has had history of irregular intake of Anti-Tubercular Treatment (ATT) from Government set up after being diagnosed as a case of pulmonary tuberculosis. Local examination revealed an irregular lump in upper inner and outer quadrants 6 cm × 4 cm, irregular in shape, well defined margins, firm to hard, minimally tender, not fixed to underlying muscles or overlying skin.

Results: After proper workup, patient was operated, and well marginated abscess was dissected and evacuated. Anti-tubercular treatment was started and continued leading to successful amelioration of the condition.

Conclusion: Unusual presentation of old pulmonary Koch's patient who has defaulted in treatment presented with unilateral breast lump posed as a challenge in proper diagnosis. Surgery after clinical radiological correlation followed by antitubercular therapy resulted in remission of the condition.

Keywords: Breast; Mastitis; Pulmonary koch's; Tuberculosis

INTRODUCTION

Tuberculosis breast is relatively rare. Incidence varying from 3%-4.5% in developing countries (India). Extrapulmonary TB is on the rise. Tuberculosis of the breast has no defined clinical features. Tuberculosis is aptly called as a great mimicker. Because of its varied presentations it is often said to be often present as one of the differentials in most of enigmatic cases with dubious or non-conspicuous diagnoses. It mimics breast abscess or carcinoma breast, both clinically and radiologically [1]. Tuberculosis breast incidence among the total number of mammary conditions to vary from 0.64%-3.59% as reported in several Indian series. Less than 100 cases of mammary Tuberculosis were reported from India till 1987. 500 cases

documented from world medical literature by Hamit and Ragsdale 1982. The first 13 cases of breast TB from India were reported by Chaudhary in 1957 from 433 breast lesions studied [2].

CASE PRESENTATION

50 year rural women presented in OPD with complaints of slightly painful right sided breast lump for more than six months. There was no history of any trauma, fever, or any other associated symptoms. There was no history of any diabetes mellitus, hypertension. Patient had been treated for persistent cough at her native village. Patient has had history of irregular

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intake of anti tubercular treatment from Government set up after being diagnosed as a case of pulmonary tuberculosis [3].

There was no history of any previous lump, any previous breast surgeries, any history of malignancies or breast lumps in family. However, patient has had undergone tubal ligation for family planning at a government setup 20 years back. Clinically her vitals were stable and maintained, general examination was unremarkable except for mild pallor. Systemic examination was unremarkable for central nervous system, cardiovascular, and per abdomen. However respiratory system showed decreased air entry in apical zone on right side with few scattered rhonchi. Local examination revealed an irregular lump in upper inner and outer quadrants 6 cm × 4 cm, irregular in shape, well defined margins, firm to hard, minimally tender, not fixed to underlying muscles or overlying skin. Overlying skin has no sinus, erythema, induration or any enlarged vessels, pigmentation, or discoloration [4].

Investigations

Chest X ray PA view done revealed reticulonodular opacities. Ultrasound breast showed right breast having both solid and cystic heterogeneous collection noted in retro areolar area, somewhat suggestive of likely to be a breast abscess [5].

Contrast enhanced computerized tomographic chest scan revealed pleuroparenchymal fibrotic opacity with fibro cavitory changes with tractional bronchiectasis, with adjacent infiltrative opacities in right upper lobe of lung. There has evidence of rib destruction present, with few enlarged partially calcified lymph nodes also seen. Pulmonary Function Test showed mild restriction of functions. Sputum for Acid Fast Bacilli (AFB) was reported negative for 3 consecutive days. Fine Needle Aspiration Cytology (FNAC) revealed right breast to be having granulomatous lesion (Figure 1) [6].

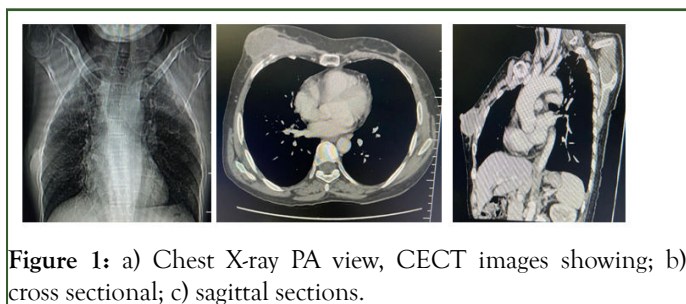


Figure 1: a) Chest X-ray PA view, CECT images showing; b) cross sectional; c) sagittal sections.

Per-operative

After workup, patient was taken to operation theatre under informed consent for lumpectomy. A circumareolar incision was given, and layer wise dissection done. During deep dissection pus started emanating out, revealing the retromammary pectoral and intercostal breach with mass present but with intact pleura and caseous cheesy material coming out noted. Small part of rib and dead bone with necrotic material noted. 4 cm × 2 cm lump with solid and cystic component with caseous material with visible pectoral and intercostal communication but not beyond thoracic pleura was found. Intra operatively it showed to be a well walled of cold abscess coming from the deeper part chest after making path in the intercostal area. It was

communicating with the cavitory lesion in the lung parenchyma. Well margined abscess was dissected and evacuated [7].

Post-operative

Post-operative period was uneventful. Patient was allowed liquids orally, the evening following surgery. Patient tolerated the surgery well and has had satisfactory progression in improvement. Anti-tubercular treatment was started and continued leading to successful amelioration of the condition. Patient was discharged on 5th post-operative day with sutures in situ and alternate day dressing with antibiotics and symptomatic treatment was advised.

Histopathology report

Biopsy revealed breast tissue showing multiple well-formed granulomas composed of lymphocytes, histiocytes, epithelioid cells and langhans type of giant cells with dense chronic inflammation. Large area of caseous necrosis also seen. Zhiel Neelson stain for Acid Fast Bacilli (AFB) was found to be positive. Overall impression of granulomatous mastitis (Tubercular mastitis) (Figure 2).

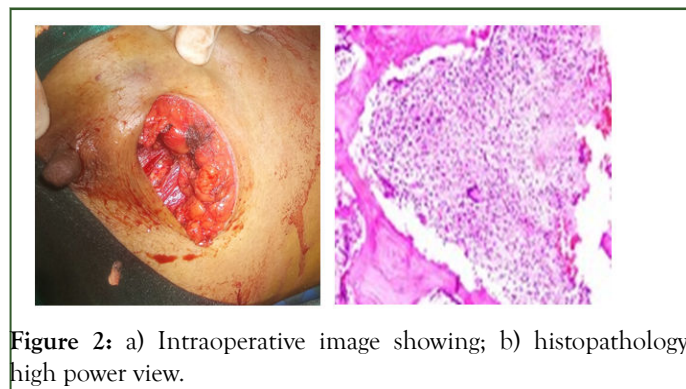


Figure 2: a) Intraoperative image showing; b) histopathology high power view.

Follow up

Patient fared well with Anti tubercular treatment and related symptomatic medication in the follow-up. At 12 months post-operative period patient has no new symptoms or any evidence suggestive of breast, lung, or any other system tubercular involvement.

DISCUSSION

Primary breast tuberculosis is rare. Breast tuberculosis classified into three types namely nodular, disseminated, sclerosing varieties. Infection pathways can be multiple namely centripetal lymphatic spread being the most common followed by hematogenous and others being direct inoculation, ductal infection, skin abrasions, duct openings of nipples. Tubercular spread can occur from lungs to the breast tissue *via* tracheobronchial, paratracheal, mediastinal lymph trunk and int. mammary node. Uncommonly there can be a direct spread as was seen in the index case [8].

In investigations Mammography has limited role in diagnosis because of nonspecific features. In elderly patients, differentiation from malignancy is really difficult clinically. Fine

Needle Aspiration Cytology (FNAC) pictures are often diverse presenting inflammatory picture of both lymphocytes and polymorphs or polymorphonuclear cells with necrotic material with or without acid fast bacilli. Histopathology usually shows polymorphonuclear cells with necrosis and epithelioid granulomas, presence of caseation necrosis. Staining for Acid Fast Bacilli (AFB) may be positive or negative. Mycobacterial culture which is considered to be the gold standard for diagnosis tuberculosis. Time Factor is an important constraint, as culture requires a significant amount of time. Also, frequent negative is encountered in paucibacillary cases, proving to be another important limitation.

CONCLUSION

Tuberculosis Breast is actually a diagnosis of exclusion, especially in endemic areas patients, with poor response to antibiotics in breast inflammation are to be treated with high suspicion. Tuberculosis breast is important as an important differential for carcinoma breast and pyogenic breast abscess. Fine needle aspiration cytology provide rapid diagnosis, prevents pharamaco therapeutic vacuum, ensures early institution of antitubercular treatment and thus minimises complications.

A positive staining for Acid Fast Bacilli (AFB) is confirmatory for Tuberculosis and start of antitubercular treatment. Treatment of breast tuberculosis entails standard antitubercular treatment for 6 months. Regimen being 2 months of intensive phase (Isoniazid, Rifampicin, Pyrazinamide, Ethambutol) and continued further as continuation phase (Isoniazid, Rifampicin) for next 4 months. Indications for Surgery are poor response to antitubercular treatment, draining cold abscesses, excision of residual lumps, cosmesis, debulking, getting tissue for Tubercular polymerase chain reaction and histopathological examination. Simple mastectomy with/without axillary clearance only for extensive disease with a large painful ulcerated mass involving the entire breast, May occasionally be required. In high clinical suspicion of

tuberculosis, a trial of antitubercular treatment is both diagnostic and therapeutic.

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CONFLICT OF INTEREST

None.

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