



UNILATERAL AXILLARY LYMPHADENITIS FOLLOWED BY BREAST TUBERCULOSIS FOLLOWING A CHEST TRAUMA - A RARE CASE REPORT

General Surgery

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ABSTRACT

One uncommon type of extra-pulmonary tuberculosis is breast tuberculosis. It is uncommon in western nations and typically affects lactating and multiparous women, but it is also uncommon among older and male women. It presents differently clinically, radiologically, and pathologically, and it may resemble a breast abscess or cancer. Since constitutional symptoms are rarely present, clinical diagnosis is even more difficult. We report here the case of a young woman with previous chest trauma followed by a left breast lump.

KEYWORDS

Breast, Tuberculosis, Trauma

INTRODUCTION:

Breast involvement in tuberculosis (TB) is uncommon, despite the disease being a global public health concern today. In developing nations like Africa and Asia, where tuberculosis is prevalent, it is more commonly observed. It is more common in endemic areas, multiparous, lactating women, and throughout the reproductive age. Its clinical appearance can mimic both breast cancer and pyogenic abscesses; it is frequently misdiagnosed or diagnosed too late.

Women of reproductive age are frequently afflicted with breast TB, which typically manifests as a unilateral, painless breast tumor or as an abscess.

Due to frequent extension from the axillary lymph node to the breast, breast tuberculosis typically manifests as a single breast lump in the upper outer or central quadrant over the course of several months to years. It is rare to present with bilateral or numerous breast lumps. Usually firm, uneven, and ill-defined, the mass resembles cancer. In addition to presenting with breast edema, peau d'orange, nipple retraction, ulceration of the surrounding skin, and breast abscess, it may be painful, movable, or fastened to the skin, underlying muscle, and chest wall.

Sarcoidosis, fungal infection, cancer of the breast, bacterial breast abscess, mastitis, and other granulomatous illnesses are differential diagnoses for breast tuberculosis. Breast ultrasonography and mammography are not sensitive enough to detect breast TB. Accurate diagnosis of such instances can be aided by tuberculin skin test, interferon gamma release assay, computed tomography (CT) scan, open biopsy, fine needle aspiration cytology (FNAC), and tuberculosis polymerase chain reaction (TB PCR).

Antitubercular medication is the cornerstone of treatment for a minimum of six months. Surgical therapy often consists of sinus resection, segmentectomy, excisional biopsy, abscess drainage, and infrequently, simple mastectomy. Here we present a patient who had a lump in the right breast after a prior chest trauma.

Case Presentation:

A 22-year-old non-lactating woman had an alleged history of slip and fall at house causing blunt trauma to her chest. She complained of pain, intermittent fever and sudden onset non progressive lump on her right breast. She consulted a nearby clinic and was prescribed with NSAIDs and oral antibiotics and pain subsided.

Even after 20 days, the patient's pain and non- progressive lump on right breast persisted. None of the family members had a history of

breast cancer or TB. She did not have a history of expectoration or a persistent cough. No prior history of appetite reduction or weight loss was present. She never indulged in smoking.

Upon clinical examination, a 10 x 6 cm lump was found in lower & upper outer quadrant of right breast and extending into right axilla. There were no local skin changes, NAC normal with no discharge. Lump was tender and no local rise in temperature.

Lump was firm in consistency with ill-defined margins and smooth surface, freely mobile fixed to breast tissue but not to chest wall and overlying skin. Multiple palpable lymph nodes were noted at right axilla. Contralateral breast and axilla otherwise normal.

Lab investigation showed mild leukocytosis, sero-negative. On Ultrasonography, two lesions were noted in right breast, one was 4.6 x 4cm irregular ill-defined hypoechoic collection with thick internal echoes was noted at 7-9'o clock position, second lesion was 3.6x2.2 cm at 10- 12' o clock position suggestive of focal mastitis with evolving abscess. Large matted LAD is seen in right axilla – total nodal mass 4.5x3.0x2.5cm, large node 3.2x 1. 6cm nodes show some area of necrosis. Chest x-ray appeared normal.

Patient was planned for incision and drainage for right breast evolving abscess and excisional biopsy of right lymphadenopathy. 30cc pus drained and was sent for culture sensitivity & CBNAAT, breast tissue for HPE and excised LN's for HPE & CBNAAT. Culture was negative, CBNAAT was positive for mycobacterium tuberculosis.

Breast tissue & Lymph node HPE showed predominantly hemorrhagic tissue and necrotic material with numerous granulomas composed of epithelioid cells, Langerhans type giant cells with central caseous material and lymphocytes. At focal areas granulomas are present. Features are of Tuberculous mastitis and lymphadenitis.

Following that, she began receiving antitubercular medication in accordance with national procedure. Our medications, which included ethambutol, pyrazinamide, isoniazid, and rifampin, were prescribed for a total of four months.

After that, rifampicin and isoniazid were prescribed for an additional two months. In addition to the recommended tuberculosis medication, she was also supplied Vitamin B6.

Within a few weeks, the patient's breast lesions had significantly improved and she was released from the hospital in good clinical condition. At the 6-month visit of follow-up, she was well and the therapy was completed.



Fig 1.1 ill-defined hypoechoic collection with thick internal echoes suggestive of focal mastitis with evolving abscess

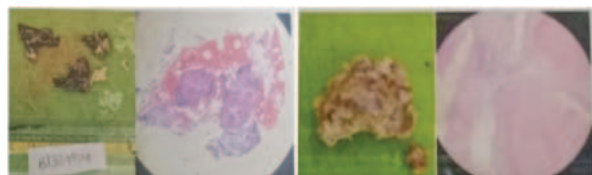


Fig 1.2 HPE of breast tissue and lymph nodes showing numerous granulomas compose of epithelioid cells, Langerhans type giant cells with central caseous material and lymphocytes.

DISCUSSION:

As a developing country, India has a high rate of tuberculosis. Although extrapulmonary TB is also common, pulmonary TB accounts for the majority of cases. Comparing breast tuberculosis to other extrapulmonary diseases, it is quite uncommon. In histological breast specimens, its incidence varies from less than 0.1% in western countries to 3 to 4.5% in poor countries. With a peak occurrence in the age range of 21 to 40 years, it affects females significantly more frequently than males. Breast tuberculosis risk factors include multiparity, lactation, trauma, and a history of suppurative mastitis in the past. Hence, even in the absence of pulmonary symptoms, it is imperative to do a thorough clinical and radiographic evaluation of the chest, as we have high incidence of tuberculosis.

The first description of mammary tuberculosis was published in 1829. While secondary forms are more prevalent, primary involvement occurs on occasion. McKeown and Wilkinson divided breast tuberculosis into five categories: tubercular mastitis nodules, diffused or confluent mastitis, sclerosing mastitis, tuberculous mastitis obliterans, and acute miliary mastitis are the five types of tubercular mastitis.

The hematogenic route, lymphatic routes from the axillary, mediastinal, or cervical lymph nodes, direct routes from underlying structures like the ribs or pleura, or the injection of infected sputum are the methods that mycobacterium tuberculosis complex spreads to the breast. Our patient had confluent tubercular mastitis; in this instance, the most likely route of MTC diffusion is through lymphatic systems.

We still don't know exactly what role the chest trauma played, if at all. There have been suggestions that trauma could be a risk factor for breast TB from the first reports.

Breast TB commonly manifests as a breast mass, either with or without an ulceration of the skin above it and with draining sinuses. While several sinuses and nodules are possible, multiple lumps are uncommon. Compared to breast cancers, breast TB is more frequently associated with tenderness. Initially, our patient also complained of breast pain and lump. The most prevalent location of breast TB involvement is the upper outer quadrant. Rarely do the areola and breasts get involved. Although it is more common in cases of breast cancer, breast TB can also cause fixation of the skin above the breast TB.

Less than 20% of cases have constitutional symptoms such fever, malaise, weight loss, and night sweats. The three types of breast TB that have been identified most recently are nodular, diffuse, and sclerosing, depending on the clinical and radiological characteristics. The nodular shape is well-defined and grows slowly. On mammography, it exhibits an oval tumor shadow that is difficult to

distinguish from breast cancer. Numerous lesions connected to sinus formation define the disseminated form. On mammography, this type resembles inflammatory breast cancer. The disease's sclerosing variant, which affects older women, is typified by an overabundance of fibrotic processes.

A crucial diagnostic method for identifying breast tuberculosis is FNAC/excision biopsy. Because the results of imaging modalities like mammography and ultrasonography are frequently identical to those of breast cancer, their usefulness is restricted. Since Langhans giant cells, necrosis, and epithelioid cell granulomas can all be directly seen, FNAC/excision biopsy of the breast can be used to obtain breast cells. Additionally, we can aspirate the sample and do TB PCR or acid fast bacilli stain.

CONCLUSION:

When examining breast lesions, clinical knowledge of tuberculosis is always required. Trauma may represent a risk factor for the reactivation of a latent tuberculosis infection, and this connection may reveal novel processes of MTC dissemination. FNAC/excision biopsy ought to be carried out in each situation with an unclear origin. Successful diagnostic and treatment processes depend on having laboratories with qualified microbiologists and pathologists. Treatment with anti-tuberculous drugs alone typically results in full recovery.

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