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TUBERCULOUS COLD ABSCESS OF BREAST- A DIAGNOSTIC CHALLENGE

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Authors' contributions

This work was carried out in collaboration with all authors. All authors read and approved the final manuscript.

Abstract-
Tuberculosis (TB) of the breast remains a diagnostic dilemma. Its initial presentation mimics various mammary pathologies, including malignancy, mycotic abscesses and granulomatous mastitis and is therefore easily mis-diagnosed.We present a case of young female 22 years old with complaints of productive cough since 1 month, local examination of breast revealed a palpable mass in right breast in upper outer quadrant which after investigation was diagnosed with MDR-TB (Monoresistant) of cold abscess of Breast. Thorough diagnostic workup included clinical suspicion, radiological and microbiological investigation. Patient was started on Antitubercular drugs as per National TB Elimination Program guidelines. On follow up after 4 weeks, patient reported a significant resolution of symptoms.
Key words- Cold abscess, Granulomatous, Antitubercular drugs

INTRODUCTION-

Tuberculosis of the breast is extremely uncommonwith a frequency of 0.1% of all breast diseases and increasing to 3% in endemic areas such as India and Africa.[1,2] Young women in the reproductive age range are typically affected (21 to 30 years). The illness goes undetected and is frequently misinterpreted for cancer or pyogenic breast abscess due to non-specific clinical characteristics. The most typical manifestation is a breast lump. It frequently appears in the breast's middle or upper outer quadrant. Commonly diagnosed on radiological and microbiological investigations[3]. Various routes of transmission include-

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Haematogenous, lymphatic, direct inoculation, duct infection. Direct expansion from nearby tissues including an infected rib, costochondral cartilage, the sternum and even TB pleurisy through the chest wall or skin abrasions are also observed.

The diagnosis of Breast TB is challenging, primarily due to its rarity and unique presenting characteristics. Where no other focus has been detected, mammary TB may be primary or secondary. The lungs or lymph nodes may serve as the major focus. Even though, mammary Tuberculosis is extremely uncommon, it is typically referred to as primary when tests to determine the primary focus are inconclusive. Predominantly infection occurs through abrasions or ducts in the nipple. Secondarily spread to the breast can occur by a lymphatic or haematogenous routes from adjacent structures, with retrograde dissemination from axillary lymph nodes being the most prevalent[4]. Breast tuberculosis is more common in young women, particularly lactating women, and the incidence in lactating women ranges from 7 to 33%. It is uncommon in men.

Case-

22 years Female presented with complaints of Cough (Acute in onset, productive with whitish expectoration) since 1 month. No H/O Fever, significant Weight loss, no family history of tuberculosis.On Examination-Palpable mass in right breast in upper outer quadrant which is mobile, non tender with no discharging sinus. No palpable lymph nodes.

Lab Parameters-

Hb	8.7
TLC	7400
Platelets	210,000
MCV	74
LFTs,RFTs	Normal
HIV,HBsAg,HCV	Non reactive
IRON	11
Serum Ferritin	69
TIBC	229
Transferrin Saturation	4.80
Na/K	132/3.7
ESR	50

TFTs-within normal limit
ECG-Normal sinus rhythm

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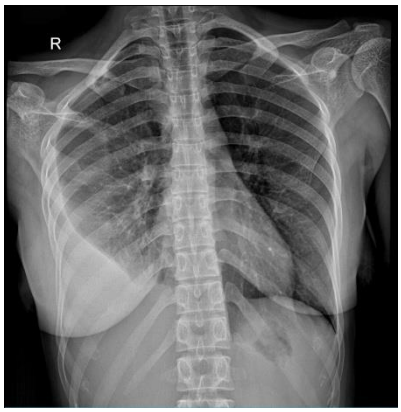
Fig.1 Chest Radiograph-No abnormality detected



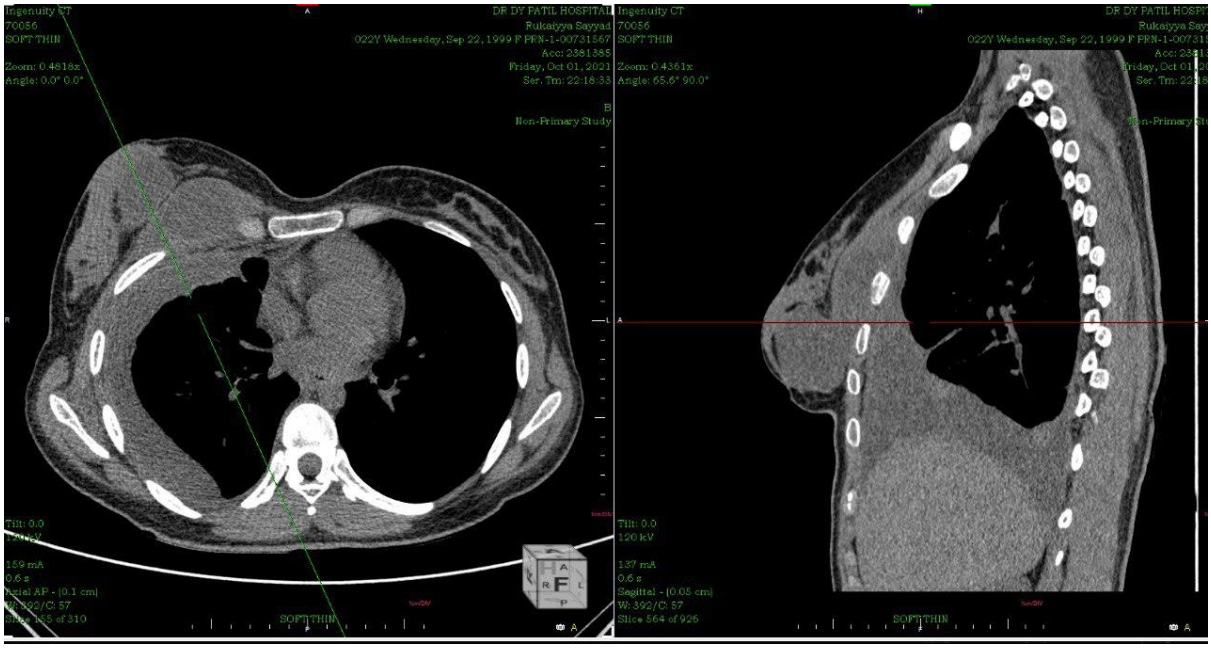
Tuberculin Skin Test-Negative

Sputum RNTCP A AND B- Negative

Sputum CBNAAT-Negative

Sonomammography of both breasts-Right breast parenchmymal Cold Abscess

HRCT Thorax- Erosion and destruction over Right 1st to 3rd Rib with fluid collection 75x45x62 mm along anterior chest wall in upper and mid hemithorax extending into right breast.



USG Abdomen and Pelvis-No abnormality detected

Fine Needle Aspiration Cytology-An acute inflammatory exudate.

Abscess Aspirate CBNAAT- MTB DETECTED WITH RIFAMPICIN RESISTANCE

Line probe assay of Abscess Aspirate - RIFAMPICIN RESISTANCE, ISONIAZID SENSITIVE

Diagnosis- Patient was diagnosed with MDR-TB (Monoresistant) of cold abscess of Breast. Patient was registered in DOTS and started on MDR-TB Regimen as per weight.

Conflict of interest-None

Consent- All appropriate consent forms are taken.

Discussion-

Tuberculosis of the breast is a rare non-malignant pathology, resemble very closely with carcinoma breast and granulomatous mastitis. Ultrasound and mammogram are helpful but could misreport as carcinoma[5]. Mantoux, AFB smears and culture can diagnose the disease. Biopsy is the gold standard to confirm the diagnosis. Cold abscess of the chest wall is a rare manifestation of tuberculosis that is frequently misdiagnosed. The entry route is typically haematogenous, lymphatic, localised, or secondary to a breast abscess, tuberculosis lymphadenitis, or chondrosternal involvement[6]. To establish a definitive diagnosis, pathological study and/or a positive culture are used with the former having a high rate of false-negatives. PCR is accurate and consistent, but it has a low sensitivity in extrapulmonary specimens from smear-negative patients[7]. The treatment of tuberculosis thoracic abscess is debatable; however, it appears that a combination of standard chemotherapy is the best option.

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