Case Report

Tuberculosis of the Breast in an Adolescent Girl: A Rare Presentation

by C. K. Indumathi, Anand Alladi, Chitra Dinakar, and Priti Lata Rout

Departments of Pediatrics, Pediatric Surgery, and Pathology, St John’s Medical College Hospital, Sarjapur Road, Bangalore – 560-034, India

Summary

Tuberculosis (TB) of the breast is a rare condition and usually affects women in the reproductive age group. Its further rarity in children, even in India, where TB is rampant, poses challenges in its diagnosis. Histopathology plays an important role in the diagnosis of this condition. We report a case of TB of the breast in a 15-year-old girl proven by histopathological study.

Key words: breast tuberculosis, adolescent, histopathology.

Introduction

Tuberculosis (TB) of the breast is a rare form of extra-pulmonary TB, even in countries like India, where TB is still rampant. It commonly affects women in reproductive age group especially during lactation and constitutes 0.64–3.59% of all breast pathologies. It rarely affects children. It presents a diagnostic challenge as it closely mimics carcinoma of the breast and pyogenic inflammatory disease. Here we report an adolescent girl who presented initially with prolonged fever and later developed tubercular breast abscess while on anti-tubercular therapy (ATT).

Case Report

A 15-year-old girl presented with the history of fever of 20 days duration. There was no history of contact with TB. On examination, she was weighing 50 kg. General and systemic examinations were unremarkable. Investigations were all normal except erythrocyte sedimentation rate of 100 mm h\(^{-1}\) and positive Mantoux test of 30 × 30 mm induration with vesiculation. Chest X-ray did not indicate TB. Family screening for TB was negative. She became afebrile 10 days after initiation of ATT.

After completion of intensive phase of ATT, she reported back with a swelling in the right axilla and a lump in right breast of 1 month duration. On examination there were two axillary lymph nodes in right axilla, firm and non-tender. Breast examination revealed a lump in the upper and outer quadrant, 5 × 6 cm, and firm, with puckering of the overlying skin. The nipple was normal in location. There was no discharge. Left breast was normal. Ultra sonogram of the breast demonstrated abscess cavity. Abscess was drained. Z–N stain of the pus demonstrated acid-fast bacilli (AFB). Histopathological examination of the tissue revealed granulomas (Figs 1 and 2). In view of developing breast abscess with AFB while on treatment, possibility of treatment failure was considered and she was restarted on category II treatment. On follow-up after 3 months, ...

Correspondence: Dr C. K. Indumathi, Assistant Professor, Department of Pediatrics, St John’s Medical College Hospital, Sarjapur Road, Bangalore – 560 034, India. Tel: 080 - 2206 5284; Fax: +91 80 - 2553 0070. E-mail <satgir@sify.com>.

Fig. 1. Histopathology of breast tissue showing granuloma consisting of langhans giant cells, epitheloid cells and lymphocytes (H & E 400).
lymph node enlargement had regressed and abscess had resolved, though there was recurrence of small abscess after 1 month. Presently she has completed the treatment and is doing well.

Discussion

Though TB is very common, involvement of breast is rare compared with other organs, as it is remarkably resistant for multiplication and survival of tubercular bacilli like spleen and skeletal muscle [1, 2]. It commonly affects adult women of reproductive age, between 20 and 40 years especially while lactating [3, 4], the youngest age reported from India being 13 years [5]. Generally, it is secondary to TB elsewhere in the body, via retrograde lymphatic extension from axillary, cervical, internal mammary or mediastinal lymph nodes. Axillary lymphadenopathy is reported in 50–75% of cases [1].

Tubercular mastitis mimics pyogenic breast abscess in younger age and malignancy in older age. It presents in three forms: nodular, diffuse and sclerosing, nodular being the commonest form accounting for 60% of presentation [2, 6]. It presents with solitary firm lump generally in upper and outer quadrant mimicking breast carcinoma or fibro adenoma. Concomitant axillary lymphadenopathy is common in this form of mastitis [7]. Mastectomies have been performed confusing this form of presentation to malignancy on few occasions [4]. Occurrence of recurring abscess also should arise the suspicion of TB. Histology of TB mastitis reveals epitheloid granulomas with AFB. Mammography and ultra sonogram may not always differentiate TB from carcinoma and pyogenic abscess [8].

Anti-tubercular treatment is the mainstay in the management. Early diagnosis and treatment is mandatory to prevent progression and disfigurement of the breast. Surgical intervention is limited to sinus tract and chronic abscess, which are unresponsive to medical therapy. Mastectomy is never indicated except in severe atrophic forms. TB mastitis should be suspected in any patient who presents with recurring abscess, lump, particularly when there is past history of TB or evidence of TB in other organs. Diagnostic procedures like Fine Needle Aspiration Cytology and excisional biopsy should be undertaken in any breast condition before subjecting to surgery as TB is essentially a treatable condition and also to avoid unnecessary mastectomies.

Relative scarcity of reports of TB mastitis in pediatric and adolescent age group prompted us to report this case.

References