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# Tuberculosis of the Breast Presenting Clinically As Carcinoma

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## Summary

Two cases of mammary tuberculosis mimicking carcinoma are presented. The diagnosis was established on histology. Local excision and anti-tuberculous drug therapy were effective.

## Introduction

Tuberculosis of the breast is rare (Goldman 1978, Guillet et al. 1982, Hamit and Ragsdale 1982). Nevertheless, this disease still occurs and rarely enters the differential diagnosis of a clinician confronted by a patient with a breast lesion. Moreover, the clinical features of mammary tuberculosis are non-specific and may simulate breast cancer. The tendency of mammary tuberculosis to mimic breast cancer emphasises the need for histological confirmation before treatment, as unnecessary mastectomy may be performed.

## Case reports

### Case 1

A 65-year-old negro woman was admitted to the Port-of-Spain General Hospital with an ulcer on the left breast of 6 weeks duration. She had noticed a lump at the site for the preceding 8 weeks before it ulcerated. On examination, there was a 2-cm-diameter ulcer with smooth and flat edges in the superolateral quadrant of the left breast. A firm, ill-defined lump, 7.5-cm in diameter, extended from the ulcer into the breast tissue. There were no palpable axillary lymph nodes and the right breast was

normal. An ulcerated carcinoma of the breast was suspected, but an excisional diagnostic biopsy showed microscopically the classical caseating tuberculous granulomata (Fig. 1). The ductal system of the breast tissue was normal. *Mycobacterium tuberculosis* could not be demonstrated with acid-fast stains.

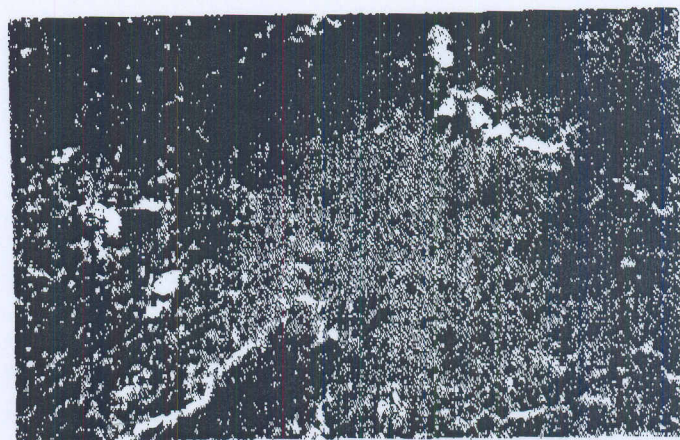


Fig. 1. Histology of the breast lesion showing classical caseating tuberculous granuloma (H&E x 100).

The patient was further evaluated for systemic tuberculosis. Clinical examination and chest X-ray were normal. Mantoux test was positive. She had BCG vaccination in her early childhood and there was no family history of tuberculosis. She was treated with INH, 300 mg and Rifampicine, 600 mg daily for 3 weeks. The patient improved and there is no evidence of recurrence of the disease 4 years following the diagnosis.

### Case 2

A 39-year-old negro woman presented with a painful lump in her left breast of 2 months duration. On examination, there was a firm, irregular lump, 6.5

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cm in diameter, in the upper outer quadrant of her left breast associated with nipple retraction. The right breast was normal and there were small, discrete, palpable lymph nodes in the left axilla. Clinical diagnosis was carcinoma, but a diagnostic biopsy of the lesion showed histologically caseating tuberculous granulomata. Zeil-Neelsen stain to demonstrate tubercle bacilli was negative.

Clinical examination and chest X-ray were normal. Mantoux test was strongly positive. None of her family members had a history of tuberculosis. She was treated with INH, 300 mg and Rifampicine, 900 mg for 4 weeks. She improved well and the axillary lymph nodes became non-palpable. She is well with no evidence of the disease 5 years following the diagnosis.

### Discussion

Tuberculosis of the breast has rarely been observed because mammary tissue appears to be an inhospitable site for survival and multiplication of tubercle bacilli (Mukerjee et al. 1974). Autopsy studies performed on patients who had died of tuberculosis did not show any case of breast involvement (Mukerjee et al. 1971, Reddy et al. 1975). However, Moegen (1931) in his classical review of the literature on mammary tuberculosis quotes an incidence of 0.5-1, 04% amongst patients with breast disease which is less than the 4.5% reported from India (Dubey and Agarwal 1968). In over 4000 patients with breast lesions treated at our institution between 1975 and 1984, only these two patients had tuberculous mastitis.

Tuberculosis of the breast is primarily a disease of women in the age group 20-50 years and is rare in men (Mukerjee et al. 1971). It is more common in women who have borne children and lactated than in nulliparous women. Trauma and pregnancy frequently have been mentioned as predisposing factors (Ikard and Perkins 1977). It has also been reported to coexist with carcinoma of the breast (Miller et al. 1971).

Mammary tuberculosis is either primary in which the breast lesion is the only manifestation of the disease or secondary to tuberculosis elsewhere in the body. The most difficult and yet the most important aspect of the diagnosis of tuberculosis of the breast is the differentiation of this disease from a pyogenic abscess in a young woman or from a carcinoma in older women. The clinical and mammographic appearances are not specific and essentially the diagnosis is histological. *Mycobacterium tuberculosis* should be looked for in the tissue with special stains, though it is very

difficult to demonstrate (Ikard and Perkins 1977); even isolation of tubercle bacilli from the lesion is seldom possible.

Other granulomatous diseases such as granulomatous mastitis, sarcoidosis, plasma cell mastitis, fat necrosis, and actinomycosis can present difficulties even on histological examination. Classical histology of tuberculosis even in the absence of demonstrable bacilli is sufficient to confirm the diagnosis. The rarity of this disease makes a proper evaluation of various treatment regimes and modalities difficult (Guillet et al. 1982). Conservative surgery and anti-tuberculous drug therapy is effective if the disease is limited. Simple mastectomy, along with appropriate anti-tuberculous drugs is recommended for extensive disease.

The fact that classical features of carcinoma (nipple retraction, skin ulceration, a hard irregular mass, axillary lymphadenopathy) were present in our cases demonstrates that clinically, tuberculous mastitis can be easily mistaken for carcinoma. Though this condition is rare in our population, these cases emphasise the importance of establishing a firm histological diagnosis as clinical errors could lead to unnecessary mastectomy.

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