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Mammary tuberculosis

Tuberculosis of the breast was first described by Sir Astley Cooper in 1829 (Mukerjee *et al.* 1971). Over 500 cases have since been described, most of them from past generations when tuberculosis of all forms was more prevalent than it is today. Even in those days the breast seems to have had a peculiar resistance to tuberculosis. In economically developed countries extrapulmonary tuberculosis is now so infrequent and tuberculosis of the breast is such a rare entity that this disease rarely enters the differential diagnosis of a clinician confronted by a patient with a breast lesion. Nevertheless this disease still occurs, as we learned recently when an elderly woman came to our clinic with a lesion of the breast which resembled an ulcerated carcinoma but which turned out to be tuberculosis.

Tuberculosis of the breast is primarily a disease of women in the age group from 20 to 50 years (Mukerjee *et al.* 1971). It is rare in males, prepubescent females, and elderly women. 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 & Perkins 1977). It also has been reported to occur in conjunction with carcinoma of the breast (Miller *et al.* 1971); this occurrence may well be coincidental.

In this age of antituberculous chemotherapy, mammary tuberculosis is a disease of underdeveloped countries. In India, it represents 3 to 4.5% of surgically-treated breast disease (Ikard & Perkins 1977). Tuberculosis may be uncommon in

the breast, compared to other organs, because mammary tissue appears to be an inhospitable site for survival and multiplication of tubercle bacilli, as is skeletal muscle and the spleen (Mukerjee *et al.* 1974). Nagashima found no case of breast involvement in 34 autopsies performed upon patients who had died of miliary tuberculosis (Mukerjee *et al.* 1971). In a study of 10 000 necropsies performed upon patients who died in a tuberculosis sanitarium, mammary tuberculosis was found in only 7 patients (Raw 1924). In over 760 000 admissions to our hospital from 1940 to the present, only one case of tuberculosis mastitis has been seen.

The most difficult and yet the most important aspects of the diagnosis of tuberculosis of the breast are the differentiation of this disease from a simple pyogenic abscess in a young woman or from a carcinoma in the older woman. Clinical signs are unreliable in these differential diagnoses. Purulent discharge, local pain, and the presence of active tuberculosis foci elsewhere are supportive but not absolute criteria. The patient who presents with a lump or an infection or a combination of both in a breast rarely can be diagnosed as having tuberculosis mastitis by clinical criteria alone. The most reliable methods of diagnosis are by bacteriological cultures of aspirates from the lesion and histological examination of tissues obtained by biopsy. Only 25 to 30% of the reported cases of tuberculosis mastitis reviewed by Morgen (1931) had cultures positive for tubercle bacilli.

The main types of mammary tuberculosis include the nodular form, disseminated tuberculosis mastitis, and the sclerosing form. The nodular form is most common: it is characterized by a circumscribed, caseous lesion growing slowly

in the breast; the lump is painless, but eventually it will erode the skin and cause inflammation and discharge. Disseminated tuberculous mastitis is characterized by multiple confluent foci which caseate and form discharging sinuses and ulcerations; the breast is dense, and the skin is indurated and painful. Excessive fibrosis is the dominant feature in the sclerosing form; progress of the lesion is slow, and suppuration is rarely seen; this form typically is seen in elderly women and is difficult to distinguish from carcinoma.

Tuberculosis of the breast may be primary or secondary. In up to 60% of reported cases, acid fast bacilli have not been isolated from any site other than the breast. Routes of infection are from haematogenous dissemination, lymphatic spread, and direct extension of pulmonary disease (McKeown & Wilkinson 1952).

Suggestions from the recent literature for treatment of tuberculosis of the breast vary somewhat. Available antituberculous drug regimens are effective if the disease is limited and if employed with some form of drainage. Simple

mastectomy, along with appropriate antituberculous drugs, is recommended for extensive disease. The rarity of this disease makes a proper evaluation of various treatment regimens and modalities difficult.

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