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Tuberculosis of the Breast

ERTUĞRUL GÖKSOY,[1] METE DÜREN,[1] VEDAT DURGUN[1] and NESRIN UYGUN[2]

From the Departments of [1]Surgery and [2]Pathology, Cerrahpaşa Medical Faculty, University of Istanbul, Turkey

ABSTRACT

Objective: To present our 20 years experience of tuberculosis of the breast.
Design: Retrospective study.
Setting: Teaching hospital, Turkey.
Subjects: 9 women with tuberculous mastitis.
Main outcome measure: Cure.
Results: All cases underwent frozen section and excision. One required a simple mastectomy because of the extent of destruction; the remainder underwent lumpectomy. All patients were given rifampicin, ethambutol, and isoniazid, and the three who had tuberculosis of other organs were also treated with streptomycin. Mean follow up was 87 months (range 6–178) and two patients were lost to follow up, at three and six years, respectively. Histological examination showed the presence of tubercle and central caseation in 8 cases and granulomatous infiltration in one.
Conclusion: Tuberculous mastitis is rare, and should be suspected in any woman with persistent breast abscesses and sinuses, particularly if she lives in an area from which tuberculosis has not been eradicated. Conservative surgery and antituberculous drugs are the treatment of choice.

Key words: tuberculosis, breast disease, antituberculous drugs, conservative surgery.

RÉSUMÉ

But: Rapporter notre expérience de la tuberculose mammaire qui porte sur 20 ans.
Type d'étude: Rétrospective.
Provenance: Hôpital universitaire, Turquie.
Patients: Neuf femmes ayant une mastite tuberculeuse.
Principal critère de jugement: La guérison.
Résultats: Toutes les patientes ont eu un examen histologique extemporané et une exérèse. Une patiente a eu une mastectomie du fait de l'importance des lésions; les autres ont eu une tumorectomie. Toutes les patientes ont eu de la rifampicine, de l'éthambutol, et de l'isoniazide, et les trois patientes qui avaient des lésions tuberculeuses touchant d'autres organes ont été traitées aussi par de la streptomycine. La durée moyenne de suivi était de 87 mois (extrêmes 6–178) et deux patientes ont été perdues de vue à 3 ans et 6 ans respectivement. L'examen histologique a montré la présence de follicules tuberculeux avec nécrose caséeuse centrale dans 8 cas et une infiltration granulomateuse dans un cas.
Conclusions: Les mastites tuberculeuses sont rares et doivent être suspectées chez toute feme ayant un abcès ou un écoulement persistants du sein, en particulier si elle vit dans une zone dans laquelle la tuberculose n'a pas été éradiquée. Le traitement de choix associe chirurgie conservatrice et antituberculeux.

Mots-clés: tuberculose, affection mammaire, antituberculeux, chirurgie conservatrice.

INTRODUCTION

Tuberculosis of the breast is rare in western countries, but even in those countries in which it is endemic it is difficult to diagnose and often confused with breast abscess or carcinoma.

During the last 20 years (1973–1993) we have treated nine cases in our department, and we present our experience.

PATIENTS, METHODS, AND RESULTS

The clinical details of the nine patients are shown in Table I.

All cases were operated under general anaesthesia and frozen section showed that the lesion was benign in every case. Our treatment of choice is lumpectomy, but in one case we had to perform a simple mastectomy because of the size of the mass and the extent of tissue destruction. Histological examination showed tuberculous mastitis with tubercles and central caseation in eight cases and granulomatous inflammation in one (Fig.1). All cases were given antituberculous therapy with rifampicin for six months, and ethambutol and isoniazid for 12 months. Streptomycin was used only in three patients who had tuberculosis of other organs as well. Mean follow-up was 87 months (range 6–178 months) and two patients were lost to follow up at three and six years One case could not be followed after six years and one case did not respond to the invitation letter to the clinic at the third year of her follow-up.

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Table I. *Details of nine women who presented with tuberculosis of the breast between 1973–93*

	Number of cases
Mean age (years)	38
Range	19–75
Mean duration of symptoms (months)	8
Range	1–36
Clinical features	7
Painful tumour	5
Upper outer quadrant	5
Abscess	6
Enlarged lymph nodes	3
Associated tuberculosis	3
Kidney	1
Lung	1
Peritonitis	1
Previous treatment	
Drainage of abscess	2
Drainage from sinus	5
Investigation	
Fine needle biopsy	3
Surgical treatment	
Lumpectomy	8
Simple mastectomy	1

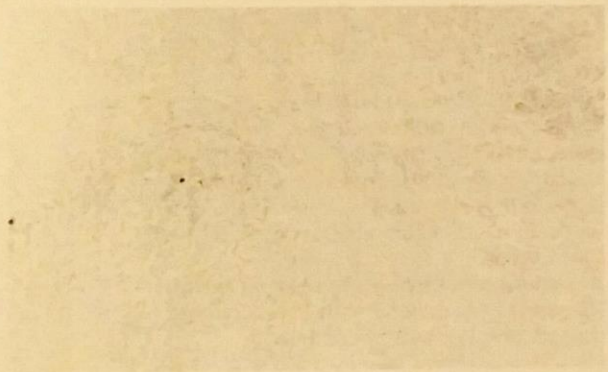


Fig. 1. Histological appearance of tuberculous mastitis: Granulomatous inflammation with epitheloid hystiocyts and Langhans giant cells in the breast stroma. (Haematoxylin and eosin, original magnification × 80)

DISCUSSION

Hippocrates named tuberculous lesions "phthisis" from the Greek word meaning "to decay", and this is synonymous with pulmonary tuberculosis and its associated asthmatic breathing, Sir Astley Cooper reported the first case of mammary tuberculosis in 1829 and named it "scrofulous swelling of the bosom" (4, 10).

Tuberculosis of the breast is a disease of the developing countries with an incidence of 3%–5% of all breast diseases treated surgically. In western countries it accounts for less than 0.1% of all breast specimens submitted to histological examination (5). In Turkey



Fig. 2. Tuberculosis of the left breast with multiple sinuses in a young woman

tuberculous mastitis accounts for 4.9% of all mastitis (8).

The disease is common among younger women and but rare in men, the elderly, and prepubertal girls. The tumor mimics breast carcinoma in older patients, and breast abscess in younger ones (Fig. 2). One of our patients presented with a breast lesion and tuberculous peritonitis, so the diagnosis was presumed.

Primary infection of the breast through abrasions or through the openings of ducts in the nipple is possible (2). Infection may also be secondary, but the route is difficult to ascertain; in our series four cases were secondary to involvement of lymph nodes or another organ. Haematogenous spread is said to occur but in a necropsy series of 34 patients with miliary tuberculosis no mammary lesions were found (6). Retrograde infection from lymph nodes to breast was found in one patient in whom the infected axillary node presented before the breast lesion developed. It had been thought that pregnancy and lactation made the breast more susceptible to tuberculous infection, but a study of 743 pregnant women with tuberculosis at other sites showed that this was not so (7). One of our patients had an uneventful pregnancy but lactation was mainly from the opposite breast.

There are three types of tuberculosis of the breast, the most common type of which is nodular tuberculous mastitis which develops slowly and painlessly. Its caseating lesion resembles carcinoma on a mammogram, and draining sinuses are common. The diffuse type is characterised by multiple foci, whereas the sclerosing type occurs in the older women (1, 9). On mammography the lesions show as nodular masses

with well-defined borders and no increase in vascularity, findings which are similar to those of fibroadenosis (4). Three of our patients had mammograms that were of no diagnostic value. Fine needle aspiration biopsy was done in three patients; in two it showed caseation of a probably granulamatous lesion and in one necrotic material. Culture is not always helpful. In only three of our six cases with abscess cavities were acid-fast bacilli cultured.

We had one case of granulamatous mastitis with no sign of tubercle in which the differential diagnoses were fat necrosis, plasma cell mastitis and actinomycosis. She responded well to antituberculous drugs and the lesion disappeared six months after treatment started. Histologically fat necrosis is confined to the adipose tissue of the breast in which there is a granulomatous reaction around broken down fat globules (2). In plasma cell mastitis plasma cells and giant cells accumulate in the breast tissue in response to the irritation of fatty material within the dilated ducts. Actinomycosis is characterised by the sulfur granules that drain from the sinuses of the suppurating lesions, and lymph node involvement is common.

Streptomycin was used only for cases in which organs other than the breast were involved. In other cases triple drug treatment with rifampicin, ethambutol and isoniazid was effective.

In conclusion, if a young woman presents with persistent breast abscess or multiple sinuses following adequate surgical excision the clinician should consider the diagnosis of tuberculous mastitis, particularly if she originates from an area, where tuberculosis is still endemic.

REFERENCES

1. Alagaratnam TT, Ong GB. Tuberculosis of the breast. Br J Surg 1980; 67: 125–126.
2. Banerjee SN, Ananthakrishnan N, Mehta RB, Parkash S. Tuberculous mastitis: A continuing problem. World J Surg 1987; 11: 105–109.
3. Hale JA, Peters GN, Cheek JH. Tuberculosis of the breast: Rare but still extant. Am J Surg 1985; 150: 620–624.
4. Kirby WM. Tuberculosis. In: Harrison TR, ed. Principles of internal medicine. Philadelphia: Blakiston; 1950: 901–934.
5. Morgen M. Tuberculosis of the breast. Surg Gynecol Obstet 1931; 53: 593–605.
6. Nagashima Y. The role of tuberculosis of the female breast in the presence of tuberculosis of the internal organs and especially in milliary tuberculosis. Arch Anat Pathol 1925; 254: 184.
7. Schefer G. Tuberculosis of the breast Am Rev Resp Dis 1955; 72: 810–824.
8. Ünal H, Ünal G, Alev I. Memenin iltihabi hastaliklari. T Tip Cemiyeti Mec 1975; 41: 519 (Turkish).
9. Ward A, Field MA, Collins REC. Tuberculosis of the breast. Br J Rad 1978; 51: 1012–1014.
10. Wilson TS, MacGregor JW. The diagnosis and treatment of tuberculosis of the breast. Can Med Assoc J 1963; 89: 1118–1124.

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Address for correspondence:
Mete Düren, M.D.
Akatlar Maya Sitesi K20
80630 Istanbul
Turkey