1 Brown WH. A case of pluriglandular syndrome (diabetes of bearded woman). *Lancet* 1928; **ii:** 1022–3.
2 Gartner LA, Voorhess ML. Adrenocorticotropic hormone-producing thymic carcinoid in a teenager. *Cancer* 1993; **71:** 106–11.
3 Rosai J, Higa E. Mediastinal endocrine neoplasm, of probable thymic origin, related to carcinoid tumour. Clinicopathologic study of 8 cases. *Cancer* 1972; **29:** 1061–74.
4 Wick MR, Scott RE, Li C-Y, Carney JA. Carcinoid tumour of the thymus. A clinicopathologic report of seven cases with a review of the literature. *Mayo Clin Proc* 1980; **55:** 246–54.
5 Bailey RE. Periodic hormonogenesis. A new phenomenon. Periodicity in function of a hormone-producing tumour in man. *J Clin Endocrinol Metab* 1971; **32:** 317–27.
6 Liberman B, Wajchenberg BL, Tambascia MC, Mesquita CH. Periodic remission in Cushing's disease with paradoxical periodic hormonogenesis. *J Clin Endocrinol Metab* 1976; **43:** 913–8.
7 Atkinson AB, McCance DR, Kennedy L, Sheridan B. Cyclical Cushing's syndrome first diagnosed after pituitary surgery: a trap for the unwary. *Clin Endocrinol* 1992; **36:** 297–300.
8 Thorner MO, Martin WH, Ragan GE, *et al.* A case of ectopic ACTH syndrome: diagnostic difficulties caused by intermittent hormone secretion. *Acta Endocrinol (Copenh)* 1982; **99:** 364–70.
9 Estopiñán V, Varela C, Riobo P, Dominguez JR, Sancho J. Ectopic Cushing's syndrome with periodic hormonogenesis - a case suggesting a pathogenetic mechanism. *Postgrad Med J* 1987; **63:** 887–9.
10 White A, Stewart PM, Gibson S, Crosby SR, Penn R, London DR. ACTH precursors characterise the ectopic ACTH syndrome (abstract). *J Endocrinol* 1992; **suppl 132:** no 155.

Male breast tuberculosis

Chandra Jaideep, Mohan Kumar, Ajay K Khanna

Summary
Tuberculosis of the breast is rare and tuberculosis of the male breast is not a recognised entity. We describe a man with tuberculosis of the breast which was clinically thought to be a malignancy.

Keywords: breast, tuberculosis

The differential diagnosis of a swelling of the adult male breast is either gynaecomastia or carcinoma. We present a case of adult male tuberculous mastitis who presented to us with a lump in the breast, clinically suspicious of malignancy. Attention to the tuberculous nature of the lump was drawn by fine needle aspiration cytology, later confirmed by histopathology. To our knowledge this is the first case report of 'male' breast tuberculosis.

Case report

A 43-year-old man presented to us with a mildly painful lump in the right breast of three months duration. On examination it was mobile, hard, mildly tender and retro-areolar in position, 4 × 4 cm in size with nipple retraction. Ipsilateral lymph nodes were enlarged, discrete, non-tender, mobile and 1–2 cm in size. No history suggestive of tuberculosis was obtained. The clinical picture was suggestive of malignancy, but fine needle aspiration cytology revealed a epithelioid cell granuloma with lymphohistiocytic aggregates (figure 1). The routine haemogram was within normal limits. The erythrocyte sedimentation rate was 42 mm/h by Wintrobes' method. Plain X-ray of the chest did not reveal stigmata of past or present pulmonary tuberculosis.

Excision of the lump by a peri-areolar incision was done under local anesthesia and subsequent histopathologic examination revealed a tubercular granuloma with Langhan's giant cell reaction in the breast parenchyma confirming tuberculosis of the breast (figure 2).

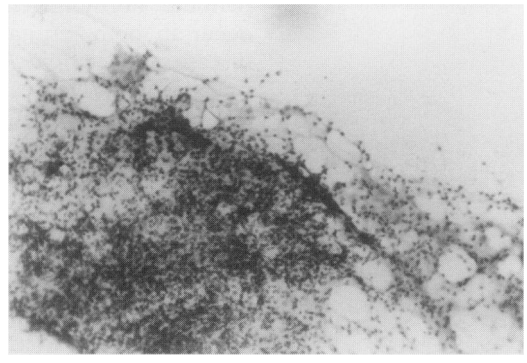

Figure 1 Fine-needle aspiration cytology revealing epithelioid cell granuloma and lymphocytic aggregates (Pap stain × 125)

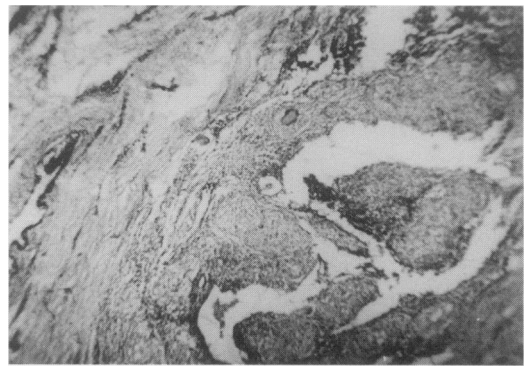

Figure 2 Photomicrograph showing epithelioid granuloma and mammary ducts (H&E × 50)

Institute of Medical Sciences, Banaras Hindu University, Varanasi 221 005, India
Department of Surgery
C Jaideep
AK Khanna
Department of Pathology
M Kumar

Correspondence to Dr AK Khanna, 33/3, Kabir Nagar, Durgakund, Varanasi 221 005, India

Accepted 21 August 1996

Learning points

- not all lumps in adult male breast are gynaecomastia or carcinoma
- a chronic inflammatory pathology should be kept in mind for male breast lesions

The patient was put on a four-drug regime for two months (rifampicin 450 mg, isoniazid 300 mg, pyrazinamide 1500 mg and ethambutol 1000 mg per day) followed by rifampicin 450 mg and isoniazid 300 mg for the next four months. The axillary lymph nodes had resolved at follow-up and the patient is symptom-free at present.

Discussion

Breast enlargement is a common clinical condition in adult men with the peak incidence of gynaecomastia in the 5th to 8th decade.[1] The two common diagnoses of an adult male breast lesion are gynaecomastia and carcinoma.[2] Inflammatory lesions are also recognised but are usually acute inflammation.[3] Tuberculosis of male breast is not a recognised entity. Even in the large series of 185 cases by Das *et al*[3] and 809 cases by Lilleng *et al*[4] none of the case was reported as tubercular.

Tuberculosis of the breast is a rare malady (incidence 0.025% of all breast diseases treated surgically) and tuberculosis of the male breast has not been reported. It is usually manifest as a unilateral mass suggestive of a carcinoma or an abscess. Mammography is usually suggestive of a carcinoma or an abscess. The discovery at excision of necrotic debris or an abscess may lead to a suspicion of an infectious or an inflammatory pathology. The clinical appearance of a pyogenic breast abscess is also very similar to tuberculosis. The most common presentation is that of a lump in the breast with or without ulceration or it may present as diffuse nodularity with or without axillary lymph node involvement, or with multiple sinuses. Exceptionally, it may present as bilateral breast masses, a unilateral mass with bilateral axillary swellings, or as a recurring breast abscess. It may co-exist with malignancy of the breast.[5]

It may occur as a primary lesion, without any preceding history suggestive of tuberculosis elsewhere in the body in the great majority of cases, or as a secondary manifestation. It should be considered in the differential diagnosis of all cases of primary pulmonary tuberculosis together with a breast lump and especially where fine needle aspiration cytology has failed to reveal the expected tumour cells.

There are three recognised modes of spread of tuberculosis to the breast: haematogenous, lymphatic and by direct extension. The second mode of spread gives credence to Cooper's theory that the breast becomes involved secondarily by lymphatic extension. There are three types of mammary tuberculosis: nodular mastitis, disseminated or diffuse type and sclerosing types clinically mimicking a fibro-adenoma, a carcinoma or fibrocystic mastitis.[5]

The diagnosis may be established by the demonstration of acid-fast bacilli in excised tissue or guinea pig inoculation (the more reliable), by fine needle aspiration cytology and/or histopathology.[3,4] The treatment of choice is surgery followed by chemotherapy for at least six months.[5] Some suggest only chemotherapy, surgery being reserved for residual masses.

In a study of 185 cases of male breast lesions only five turned out to be inflammatory, three of which were acute, one fat necrosis and the other an epithelioid granuloma (nature unspecified).[3] In another similar study of 809 cases of male breast lesions only eight were found to be inflammatory/abscess lesions, but their nature was not specified.[4]

1 Braunstein GD. Gynaecomastia. *N Engl J Med* 1993; **328:** 490–5.
2 O'Hanlon DM, Kent P, Kerin MJ, Given HF. Unilateral breast masses in men over 40: diagnostic dilemma. *Am J Surg* 1995; **170:** 24–6.
3 Das DK, Junaid TA, Mathews SB, *et al*. Diagnosis of male breast lesions: study of 185 cases. *Acta Cytol* 1995; **39:** 870–6.
4 Lilleng R, Paksoy N, Vural G, Langmark F, Hagmar B. Assessment of fine needle aspiration cytology and histopathology for diagnosing male breast masses. *Acta Cytol* 1995; **39:** 877–81.
5 Shinde SR, Chandrawarkar RY, Deshmukh SP. Tuberculosis of the breast masquerading as carcinoma: a study of 100 cases. *World J Surg* 1995; **19:** 379–81.