

Breast Tuberculosis: A Case Report

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Abstract

Primary tuberculosis of the breast unlike carcinoma is rare, but secondary lesions from cervical and axillary tuberculous lymphadenitis are not uncommon. In this case, a 60 year old woman presented with ulcerated axillary lymph node swelling and breast lump. Biopsy of the breast lump and lymph node confirmed tuberculous granuloma. She was commenced on anti-tuberculous chemotherapy and wound dressing. Her wounds and sinuses healed satisfactorily before being discharged to continue her treatment at home. She was however lost to follow up.

Keywords: Tuberculosis, breast, lymph node.

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Introduction

Tuberculosis of the breast is rare worldwide due to some improvement in public health and treatment availability. The mammary gland like the spleen and skeletal muscle is also resistant to multiplication and survival of the tubercle bacillus.¹ Reports show an incidence of 0.6 - 1.6% in developed countries and 0.25 - 4.5% in developing countries.^{1,2}

Sir Astley Cooper first described breast tuberculosis in 1829: "in young women who have enlargement of the cervical absorbent glands, I have sometimes, though rarely seen tumours of a scrofulous nature form in their bosoms."³

The clinical significance of this condition lies in its similarity to the more common breast carcinoma. For this reason, prompt diagnosis is important in order to allay patient's anxieties. The main differentiating feature between breast tuberculosis and carcinoma is the formation of sinuses in the axilla, breast and neck in the former.

The cornerstone of management of breast tuberculosis is anti-tuberculous chemotherapy as against the multimodal approach in breast carcinoma. Accurate diagnosis

is therefore important in order to provide appropriate treatment to the patient.

Case Report

A 60 year old woman from Barkin Ladi, near Jos, was referred to the surgical out patient department of the Plateau State Specialist Hospital, Jos, Nigeria, with 2 year history of left axillary lymph node swelling and 1 ½ year history of left breast lump. They were both painless.

The axillary swelling progressed until 5 months prior to presentation when 'excision' by a traditional healer resulted in ulceration with surrounding multiple discharging sinuses. The discharge was initially watery but later became frank pus. The breast lump also ruptured spontaneously at about the same time with discharge of watery materials.

There was no nipple discharge and no associated history of sore throat or cough.

There was history of low back pain but no limb weaknesses.

Examination revealed a chronically ill looking, wasted, malnourished and pale patient, in no painful or respiratory distress.

The chest was symmetrical, with resonant percussion note and vesicular breath sounds.

There was a hard lump on the upper outer quadrant of the left breast measuring 2cm by 2cm.

It was attached to skin with 2 discharging sinuses at the summit but not attached to underlying chest wall. The left axillary lymph nodes were enlarged, hard and matted. The overlying skin was ulcerated, with surrounding multiple discharging sinuses. The left cervical lymph nodes were also discretely enlarged but mobile. There was no hepatosplenomegaly and no ascites. No associated spinal gibbus or tenderness. The PCV was 27%. The Mantoux was 0mm. The retroviral screen was non-reactive. There were no hilar shadows on chest X-ray. Spinal X-ray showed spondylotic changes around the lumbar region, but no wedge

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collapse. Biopsy of the breast lump and axillary lymph node confirmed tuberculous granuloma.

Management consisted of initial, directly observed, intensive phase therapy with rifampicin, isoniazide (INH), pyrazinamide and ethambutol for 3 months. Ethambutol and pyrazinamide were discontinued after 2 months while rifampicin and INH were continued for 9 months. Vitamins and haematinics were given. She also had 1 unit of blood transfused. The wounds were dressed daily with hydrogen peroxide and Eusol. She was discharged home after 3 months of directly observed therapy, during which period the wounds and sinuses healed satisfactorily. She was however lost to follow up at the surgical out patient department.

Discussion

Breast tuberculosis accounts for about 3-4.5% of surgically treated diseases in developing countries.⁴ A study in Calabar, South eastern Nigeria showed that bacteria infections, chronic pyogenic mastitis and tuberculosis together caused breast swellings in 25% of women.⁵ Breast tuberculosis is either primary or secondary. In primary tuberculosis, the breast lesion is the only manifestation of tuberculosis, whereas, there is a demonstrable focus of tuberculosis elsewhere in the body in secondary tuberculosis.⁶ The index patient had axillary and cervical tuberculous lymphadenitis. Both forms are rare worldwide, especially in the developed countries. The frequency is however, expected to rise in future due to the AIDS pandemic.

It's common in young women between ages 20-40 years and rare in older women.⁷ Lactation is said to predispose to breast tuberculosis due to increased vascularity and trauma during this period.⁸ Incidence among the male population is rare.

Presentation is usually that of a painless breast lump with axillary lymph node enlargement.⁹ Delayed cases may present with sinus discharges from the breast, axilla or neck. The index patient presented with multiple axillary and breast sinuses.

The lump is frequently single, irregular, ill defined, hard and at times, ulcerated. This makes differentiation from

carcinoma difficult clinically.¹⁰ The index patient was referred with a diagnosis of 'Advanced breast carcinoma'. Nipple and areolar involvement is rare in breast tuberculosis but common in carcinoma. Peau d'orange is common to both conditions. The lump is commoner in the upper outer quadrant as in breast carcinoma.¹¹ Bilateral breast involvement is rare.

Diagnosis depends on histopathological examination of biopsy specimen. Bacteriological cultures of aspirate from the lesion may also be diagnostic. Fine needle aspiration cytology (FNAC) is also possible. In FNAC, the presence of epithelioid granuloma and caseous necrosis is diagnostic. Ultrasonography may reveal the mass but fails to differentiate it from carcinoma. It is however, cheap and readily available. There may be evidence of active or healed tuberculous lesion on chest x-ray, but commonly, the radiograph is normal. Mammographic findings are usually indistinguishable from those of carcinoma. Computerized Tomographic scan is used to differentiate primary from secondary tuberculosis of the breast.¹²

Magnetic Resonant Imaging may also be useful in demonstrating the extra-mammary extent of the lesion. CT-scan and MRI are however not readily available in most hospitals in developing countries. Mantoux test is of little diagnostic significance as it is usually positive in adults in endemic areas. Severe malnutrition with immunologic depression may give rise to false negative mantoux as in the index patient.

The mainstay of treatment of breast tuberculosis is anti-tuberculous chemotherapy. Healing is usual but may be delayed.

Rarely, mastectomy may be indicated for those with persistent residual infection especially where the possibility of carcinoma cannot be conclusively excluded. The index patient healed satisfactorily after 3 months of treatment. She was unfortunately lost to follow up.

Tuberculosis of the breast is rare and require a high index of suspicion in order to differentiate it from the more common carcinoma of the breast. Diagnosis rests on histological examination while treatment is with anti-tuberculous therapy.

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