

## Case Report

# Breast filariasis presenting as breast abscess: a rare entity from an endemic region

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## ABSTRACT

A thirty two year female presented with painless progressive lump in right breast with intermittent high grade fever for 10 days. No other symptoms were present. She was non diabetic, non-hypertensive with insignificant family and menstrual history. On examination there was a tender freely mobile lump of approximately 5×4 cm occupying lower inner quadrant having firm consistency and a centre fluctuant area of 1 cm, the overlying skin was erythematous. A single non tender mobile lymph node was present in the right axilla. Contralateral breast was clinically normal. High resolution sonography revealed cystic lesion from 3-6 O' clock position and axillary lymphadenopathy. The fine needle aspiration cytology showed microfilariae. Hence, a diagnosis of breast filariasis was made. Fluid aspirated from the cavity came out to be sterile. Patient improved symptomatically on di-ethyl-carbazine citrate (DEC) therapy (6 mg/kg for 2 weeks) and the lump too regressed in size.

**Keywords:** Filariasis, Diethyl carbazine citrate, Granulomatous mastitis, Benzathine penicillin

## INTRODUCTION

Filariasis is a common infective disease in tropical countries. In India it is highly endemic in Bihar, Kerala and Uttar Pradesh.<sup>1</sup> Common sites of involvement are lower limbs and genitourinary region but rarely, it has been found in thyroid, pleura, and pericardium.<sup>2-4</sup> Breast is an unusual site for filariasis and very few such cases have been reported till date.<sup>5,6</sup> Clinically it can present as a lump which easily mimics inflammatory carcinoma breast.

## CASE REPORT

A thirty two year female, housewife by occupation, resident of Hardoi, presented with a painless progressive lump in the right breast for 10 days. It was associated

with intermittent high grade fever. There was no history of nipple discharge, any complains in contralateral breast. She was non-diabetic, non-hypertensive and had not undergone any recent medical or surgical intervention. Family history was insignificant. Menstrual history was normal. Presently she was non-lactating.

The lump on inspection was involving the lower inner quadrant of right breast. It was approximately of 5×4 cm. Overlying skin was erythematous. Nipple areola complex was normal. No peau'd orange and dimpling was obvious. Left breast was clinically normal on inspection (Figure 1). On palpation, the lump was afebrile, mildly tender and firm in consistency with well- defined margins. It was not fixed to the underlying structures and skin. Right axillary examination revealed few mobile non tender nodes.



**Figure 1: Lump in the lower inner quadrant of the right breast.**

### Differential diagnosis

Organised breast abscess, granulomatous mastitis, and inflammatory breast cancer.

### Investigations

High resolution ultra-sonography of breasts revealed pocket of collection in lower inner quadrant of right breast with ipsilateral axillary lymphadenopathy. F.N.A.C. from breast lump showed few inflammatory cells lying in blood mixed proteinaceous background and microfilariae (Figure 2). Pus aspiration was done and the swelling resolved partly. Zeil and Nelson staining, culture and malignant cytology of pus were negative.



**Figure 2: Photomicrograph of FNAC from the breast lump showing microfilariae in a haemorrhagic background, H&E stain (200x).**

### Treatment and outcome

A final diagnosis of breast filariasis was made. Patient was treated with diethyl-carbazine 100 mg t.d.s. for 2 weeks. Abscess was aspirated completely.

The swelling and skin erythema regressed during the treatment course (Figure 3). Patient had unremarkable pain in the right breast on follow up at 2 weeks.



**Figure 3: Photograph showing resolved infection at two weeks follow-up after DEC therapy.**

### DISCUSSION

Breast is a rare site for filarial infection and very few such cases are known, but its presentation as a breast abscess is very unusual and has never been reported. The diagnosis of breast filariasis is difficult to reach at clinically due to the more common conditions being prevalent with similar presentation. But it should always be suspected in a patient from an endemic region. Sonomammography and histo-pathology (FNAC) are the best tools to diagnose this condition during active infection.<sup>7</sup>

Anti-helminthic therapy is effective only during active infection when the worms and microfilariae are present. DEC (6 mg/kg for 12 days) is the drug of choice. If secondary infection develops, it should be dealt with proper antibiotic course and surgical intervention, if required. Proper counselling of patient regarding the chronic complications of the disease, which in this case could be an upper limb lymphedema, is equally important. Anita et al have stated the efficacy of benzathine penicillin for minimizing lymphedema after axillary lymphnode dissection in carcinoma breast in favour of the view that low grade Staphylococcal infection potentiates lymphedema.<sup>8</sup> Olszewski et al also confirmed the effectiveness of long acting penicillin for preventing recurrent secondary infections in filarial lymphedema.<sup>9</sup> Hence in accordance with these studies, long acting penicillin appears to be a good option for preventing lymphedema and subsequent secondary infections after filariasis but further research will be needed to substantiate this fact.

### CONCLUSION

Breast is an uncommon site for filarial infection. Clinically, there are no pinpoint signs to reach at the

diagnosis. Histo-pathological test (FNAC/biopsy) is necessary for confirmation. Secondary infections like breast abscess can develop due to lymphatic stasis which should be treated accordingly. Permanent lymphatic damage can lead to irreversible lymphedema. Hence, proper counselling for chronic complications is also important.

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