Case report

An uncommon presentation of breast filariasis: A case report

ABSTRACT

Background: Filariasis is a common tropical disease but filariasis in breast is uncommon. Mostly presentation is with typical symptoms of inflammation and lump. Atypical presentation is very rare and needs to be reported.

Case presentation: We report a case of breast filariasis with its atypical presentation and challenges faced for diagnosis.

Conclusion: High suspicion for filariasis in endemic zones even with atypical presentation and adequate treatment for progression and further spread of the disease.

INTRODUCTION

Breast filariasis is an uncommon disease and most of the time it is associated with involvement of respective axillary lymph nodes. An isolated subcutaneous filarial breast lump is very rare, and it is hardly reported in the literature. Most of the cases present with painless lump in the breast with axillary nodes. Here, we discuss a case of young female who presented with single and small painless swelling in the breast and no other complaint. Case was proceeded according to the breast protocol with triple assessment. Only after ruling out malignant and other benign pathologies of breast and confirmation of the microfilaria, patient was treated conservatively.

Lymphatic filariasis is a vector-borne disease caused by nematodes *Wuchereria bancrofti*, *Brugia malayi* and *Brugia timori*, by *Culex* or *Mansonia* mosquito bite. Humans are the definitive hosts. While acute disease causes fever, chills, lymphangitis, lymphadenopathy and tropical pulmonary eosinophilia, chronic disease usually causes lymphedema of the lower limb and hydrocele. Other uncommon extranodal sites of manifestation include urogenital, renal and breast.[1] Blockage of lymphatics and fibrosis causes filarial granuloma which presents as palpable mass.[2]

CASE REPORT

Patient X, 22 years old female, resident of Uttar Pradesh, presented to General Surgery OPD at Guru Teg Bahadur Hospital in June 2024 with complaint of single painless lump in right breast for 2 months, approximately 2*2 cm in size, gradually increasing in size. It was not associated with any nipple discharge. There was no history of fever, overlying skin changes, loss of weight, loss of appetite, or tuberculosis contact. She did not have any family history of breast cancer. However, patient's aunt has history of chronic swelling of left lower limb, likely secondary to lymphatic filariasis. The patient was a non-smoker, non-alcoholic, unmarried, with regular menstrual cycles, and was not on any long-term medication.

On examination, patient was conscious and oriented with stable vitals. General physical examination was unremarkable. On regional examination, inspection was unremarkable. Palpation revealed an ill-defined, non-tender, mobile, soft to firm swelling of size 2*2 cm in the upper outer quadrant of the right breast at 11 o'clock position, 7 cm away from the areolar margin, with no axillary swelling. The left breast and axilla was normal.

Blood work-up was within normal limit including the leucocyte and eosinophil count. In keeping with triple assessment, ultrasound of the breast was ordered and it revealed few tubular, anechoic structures at site of complaint with characteristic dancing spree movement within one of them, suggesting the possibility of breast filariasis.

Fine needle aspiration cytology under USG guidance with a 24G needle and 10 cc syringe was performed next which on May-Grunwald-Giemsa stain revealed multiple microfilaria organisms along with lymphocytes in a fluid background, suggestive of breast filariasis. Patient was further managed medically with Tablet DEC (Di-ethyl-carbamazine). Swelling resolved completely with DEC and patient was followed up for 3 months with no complaints.

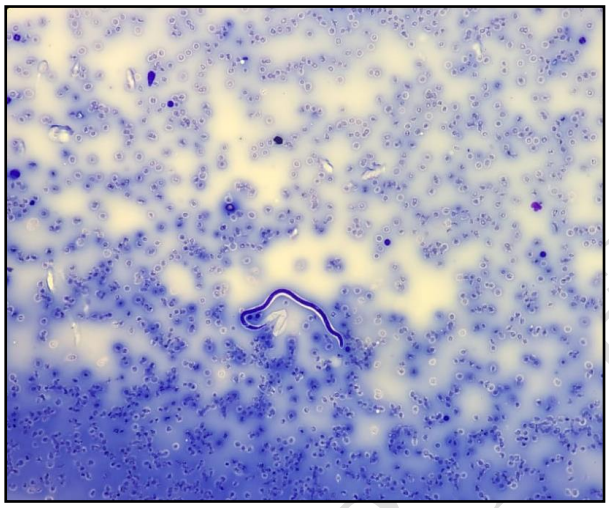

Figure 1: FNAC showing microfilaria in a background of lymphocytes on Giemsa stain 40x.

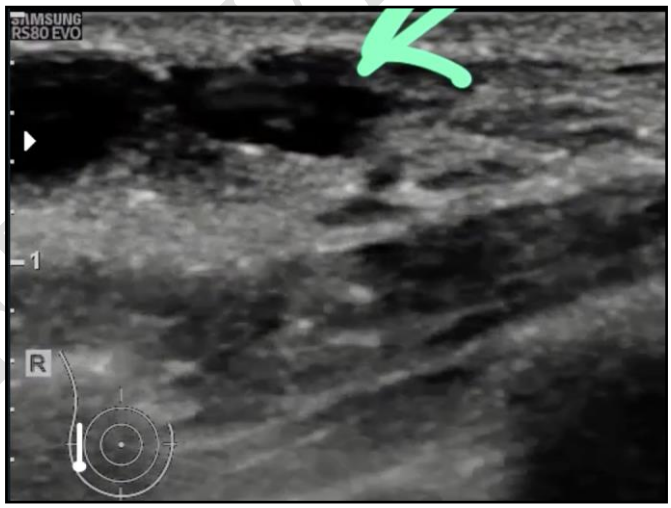

Figure 2: Ultrasound showing structure with dancing motility in a hypoechoic background.

DISCUSSION

Filariasis as extranodal involvement such as breast is a very rare condition and easily treatable with appropriate course of medication. If not diagnosed and treated on time may result into widespread disease of lymphatics which may result into residual symptoms even after course of medications.

Cases of breast filaria have been reported from the Indian subcontinent and abroad with a variety of clinical manifestations. The most common presentation was a solitary, unilateral, painless breast lump which clinically resembled fibroadenoma, while few reports of multiple lumps with associated with fever and episodic erythematous rash have also been published.[3,4] On the other end of the spectrum, obstruction of breast lymphatics can cause lymphangitis and fibrosis, presenting as hard mass with overlying skin involvement (peau d'orange) and axillary lymphadenopathy, making it difficult to clinically distinguish it from inflammatory breast malignancy. [5] However, in this case patient just had painless subcutaneous swelling.

Another report from Jharkhand, had incidental finding of filaria in metastatic axillary node after MRM (Modified radical mastectomy).[6]

Diagnosis of filariasis is based either on ultrasound imaging by the classic "dancing spree/filarial dance" rigorous movement of the filarial worm in a hypoechoic background lesion or by FNAC from lump or axillary lymph node which may reveal live adult filarial worm, microfilaria, and embryonated eggs of adult gravid female worm with eosinophils and inflammatory infiltrate in the background, with occasional granuloma formation. Thick peripheral blood smears and immunological blood work-up based on polymerase chain reaction can also aid with diagnosis.[2,3,7]

The treatment predominantly remains medical therapy with di-ethyl carbamazine.[2]

CONCLUSION

Breast filariasis is a very rare case found mainly in endemic regions. A high index of suspicion is required for its diagnosis in endemic zones even with atypical presentation, then only correct treatment for the disease can be given and prevention in progression and spread of disease. This case report urges clinicians to keep a fair degree of clinical suspicion for parasitic infections as cause of breast lump, especially in endemic countries and when presentation is atypical.

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