CASE REPORT

Filarial breast lump

Dwijesh Kumar Panda,¹ Devi Prasad Mohapatra,² Madhusmita Mohanty Mohapatra³¹Department of Pathology and Medicine, Sanaria, Bhubaneswar, Orissa, India²Department of Plastic Surgery, JIPMER, Pondicherry, Tamil Nadu, India³Department of Pulmonary Medicine, JIPMER, Pondicherry, Tamil Nadu, India

Correspondence to

Dr Dwijesh Kumar Panda, doctordwijesh@yahoo.com

Accepted 4 August 2017

SUMMARY

Lymphatic filariasis is one of the most debilitating and disfiguring scourges among all diseases. This report presents a case of a woman with recurrent breast nodularity after being previously operated for a suspected breast neoplasm. We would like to highlight the issue of similar clinical presentation of a filarial breast lump and other breast lesions leading to inappropriate therapy.

BACKGROUND

Lymphatic filariasis is one of the most debilitating and disfiguring scourges among all diseases. It is the second leading cause of disability worldwide. The infection is caused by *Wuchereria bancrofti* inhabiting the lymphatic system and causing damage and blockage of the lymphatic vessels. Involvement of breast is also quite common in lymphatic filariasis.¹ This report presents a case of a woman with recurrent breast nodularity after being previously operated for a suspected breast neoplasm. She was later found to have breast filariasis. We would like to highlight the issue of similar clinical presentation of a filarial breast lump and other breast lesions leading to inappropriate therapy.

CASE PRESENTATION

A 28-year-old woman consulted a surgeon with complaint of persistent pain in right breast for 1 month, in addition to multinodularity of 8–10 days duration and serous nipple discharge for 3–4 days (figure 1). On examination, diffuse breast

swelling, with peau d'orange appearance over the periareolar skin, tender diffuse nodularity of right breast in the inferomedial quadrant and minimal serous nipple discharge, was noted. Right axillary non-tender lymphadenopathy was also noted.

INVESTIGATIONS

The mammogram picture of right breast revealed an ill-defined hypoechoic lesion with marked vascularity. The imaging suggested the right breast is composed of fibrofatty glandular tissue without architectural distortion. The right nipple areolar complex appeared normal without skin thickening. Multiple enlarged lymph nodes were seen in right axillary region. The ultrasound study of right breast demonstrated a hypoechoic lesion in the inferomedial quadrant with possibly reactive node in right axilla. Fine needle aspiration cytology (FNAC) of the lump revealed degenerated epithelial cells in overlapping clusters along with scattered epithelioid cells and multinucleated giant cells in a background of dense, acute and chronic inflammatory cells along with necrosis (figure 2). Acid fast bacilli stain reported negative.

DIFFERENTIAL DIAGNOSIS

The mammography and ultrasonography picture suggested a chronic inflammatory lesion. The initial impression based on FNAC was suggestive of breast abscess with granulomatous mastitis.

TREATMENT

After investigations, the patient was admitted for surgery. Multiple lower quadrant suppurative lumps were noted in the right breast. A lumpectomy was done. The wound healed well. The histopathological study of the excised tissue showed a large area of abscess cavity with acute inflammatory debris, areas of foamy macrophages and multiple foci of dense periductal inflammation with dilated ducts filled with acute inflammatory debris. No evidence of atypia was seen. A diagnosis of organised breast abscess with granulomatous mastitis of the right breast was made.

OUTCOME AND FOLLOW-UP

After a period of 5 months, the patient however complained of occasional pain with tenderness in the same breast. A nodular lesion close to previous area of surgery was noted on repeat examination. As the patient resided in a filarial endemic coastal zone, a suspicion of filarial breast pathology was made. An adult filarial antigen test, OG₄C₃ assay was found to be positive in 512 antigen units. This

Figure 1 Breast showing diffuse nodularity in the inferomedial region.

CrossMark

To cite: Panda DK, Mohapatra DP, Mohapatra MM. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2017-221536

is a highly sensitive (98%) and specific test for detection of *W. bancrofti* adult parasite antigen in the blood. Night blood examination to detect microfilaria was found to be negative.

A course of diethylcarbamazine 100 mg three times daily orally was given for 4 weeks along with amoxicillin+clavulanic acid (625 mg) orally twice daily for 7 days. Doxycycline 100 mg daily after dinner was given for 6 weeks for its cidal effect on *Wolbachia*, an intracellular endosymbiont of adult filarial worms. Six weeks following therapy, the lesion decreased in size and finally disappeared. The patient was also symptomatically relieved.

DISCUSSION

Palpable breast masses are very common in women, and most palpable lumps are benign. Approximately 90% or more of palpable breast masses in women in their 20s to early 50s are benign, but patients are scared of carcinoma.^{2,3} Although the breast is not commonly affected by lymphatic filarial infection, filarial breast lump may be a common condition in filarial endemic areas. These cases can be managed by appropriate antifilarial therapy.⁴ Antibiotics are needed to control superadded infections. Surgical intervention is not required. The present case reports a breast lump in a woman secondary to lymphatic involvement of breast by *W. bancrofti* which was confused with inflammatory breast pathology and operated upon. In

Figure 2 Histopathological picture revealing granulomatous mastitis.

Learning points

- ▶ Breast lumps in women are fairly common and mostly benign in nature.
- ▶ A filarial pathology is to be suspected when a woman presents with an inflammatory breast pathology and resides in a filarial endemic region.
- ▶ A confirmation of filarial breast pathology can be made by carrying out an adult filarial antigen (OG₄C₃) assay.
- ▶ Filarial breast lumps can be usually treated non-surgically by administering antifilarial drugs in addition to antibiotics to control superadded infection.

conclusion, adequate clinical and geographical history, thorough breast evaluation, appropriate investigations and treatment at the right time will relieve similar patients of the prolonged agony.

Contributors All authors have contributed to the final manuscript. DKP and DPM have conceived the manuscript and made the draft. MMM has done literature review and contributed to the text.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

© BMJ Publishing Group Ltd (unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

REFERENCES

- 1 Bhattacharjee P, Ray R, Halder S, *et al.* Filariasis of breast: An unusual presentation. *Annals of Tropical Medicine and Public Health* 2012;5:376–8.
- 2 Moffatt CJ, Franks PJ, Doherty DC, *et al.* Lymphoedema: an underestimated health problem. *QJM* 2003;96:731–8.
- 3 Panda DK, Mohapatra DP, Mohapatra MM, *et al.* Breast filariasis or inflammatory breast carcinoma? Reaching a diagnosis. *BMJ Case Rep* 2015.
- 4 Global programme to eliminate lymphatic filariasis: progress report, 2015. *Wkly Epidemiol Rec* 2016;91:441–55.

Copyright 2017 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow