Case Report

Breast Abscess Mimicking Breast Carcinoma in Male

Debasis Gochhait, Priyadarshini Dehuri, Sandyya Umamahesweran, Rohan Kamat[1]

Departments of Pathology and [1]Radiology, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India

Abstract

Male breast can show almost all pathological entities described in female breast. Inflammatory conditions of the breast in male are not common; however, occasionally, it can be encountered in the form of an abscess. Clinically, gynecomastia always presents as a symmetric unilateral or bilateral lump in the retroareolar region, and any irregular asymmetric lump raises a possibility of malignancy. Radiology should be used as a part of the triple assessment protocol for breast lump along with fine-needle aspiration cytology for definite diagnosis and proper management.

Keywords: *Breast abscess, carcinoma, fine-needle aspiration cytology, male, ultrasonography*

Introduction

In a large study by Singh *et al*., inflammatory lesion of male breast comprised of around 2% of cases in comparison to 86% of benign and 12% malignant tumors.[1] Although gynecomastia is the most common lesion, many nonneoplastic entities are encountered in male breast such as sebaceous cyst, hematoma, fat necrosis, intramammary lymph node, and nodular fasciitis.[2] Subareolar breast abscess is a distinct clinicopathological entity in male breast and can be encountered as a unilateral/bilateral breast lump with tenderness and pain. In majority of cases, predisposing factors such as altered immunity, iatrogenic procedure, trauma, nipple piercing, and diabetes mellitus may be documented.[3] The causative organisms encountered in male breast abscess are staphylococcus, pseudomonas, salmonella, actinomycosis, and tuberculosis.[4-6] The definite plan of treatment for such cases can be rendered by a fine-needle aspiration cytology (FNAC) report followed by a culture and sensitivity of the aspirated material.

Case Report

A 45-year-old male presented to cytology outpatient department with an irregular asymmetric nontender lump adjacent to the medial aspect of the left areola with slight retraction of the nipple for the past 6 months [Figure 1a]. He had a clinical diagnosis of gynecomastia/malignancy as the lump was not associated with pain or tenderness. He had a palpable left axillary node too. On FNA, 2 ml of pus-like material was aspirated from the lump. Multiple smears were made for Giemsa, Papanicolaou, and some special stains while the remaining material in the syringe was sent for culture. The smears showed numerous polymorphs, lymphocytes, macrophages, multinucleated foreign body type of giant cells, nuclear debris, and some capillary fragments. In addition, many Anucleated Squames were seen; however, no ductal epithelial cells were present in the smear [Figure 1c and d]. The Ziehl–Neelsen stain was negative for any acid-fast bacilli while the periodic acid–Schiff stain did not highlight any fungal profile. With these cytological features, a diagnosis of breast abscess was rendered. The FNA attempted from the left axillary node showed features of reactive lymphoid hyperplasia. The microbiology report after 4 days did not reveal any organism on aerobic and anaerobic culture. The patient's blood sugar was within normal limit and HIV serology was negative. Ultrasonography of the left breast highlighted a 3 cm diameter heterogeneous lesion with multiple hypoechoic areas and internal moving echoes. There was mild increase in vascularity (color Doppler flow) in the periphery of the lesion [Figure 1b]. All the above imaging features were suggestive of an organizing abscess. The right breast was unremarkable on sonography.

Access this article online

Quick Response Code:

Website: www.jmidlifehealth.org

DOI: 10.4103/jmh.JMH_78_17

Address for correspondence: Dr. Debasis Gochhait, Department of Pathology, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India.
E-mail: debasis.go@gmail.com

How to cite this article: Gochhait D, Dehuri P, Umamahesweran S, Kamat R. Breast abscess mimicking breast carcinoma in male. J Mid-life Health 2018;9:39-40.

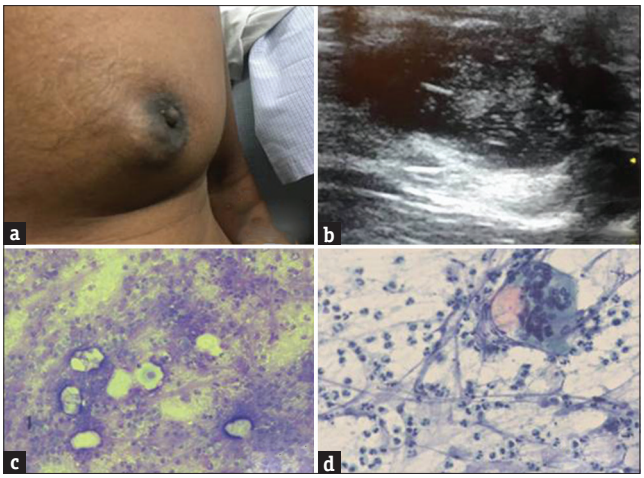

Figure 1: (a) The clinical image irregular asymmetric lump in the medial aspect of the left nipple-areolar complex. (b) Ultrasonography image: Heterogeneous lesion with multiple hypoechoic areas and internal moving echoes was noted. (c) Giemsa stain (×200): Smears show polymorphs and mature squamous cells. (d) Pap stain (×200): Smear shows a multinucleated foreign body type of giant cell

Discussion

Breast abscesses are frequent in females, but only a few cases of male breast abscess are reported in literature. Breast abscess needs to be differentiated from mastitis clinically, however, on cytology; mastitis shows mixed inflammatory cells and ductal epithelial cells whereas abscess shows inflammation with anucleated squames.[7] Breast abscess may be the sequelae of mastitis on many occasions; however, subareolar abscesses can happen even without mastitis. The epithelial cells when present with inflammation may show reactive changes so the interpretation of any atypia or malignancy should be made with caution. Any patient with breast lump should undergo triple assessment before any definite management with clinical evaluation followed by radiology and FNAC. Clinically, gynecomastia is a regular and symmetric lesion below the nipple-areolar complex; however, our patient showed an irregular and asymmetric lesion which raised clinical suspicion of malignancy. FNAC is much cheaper and easily accessible so it is the first investigation in Indian scenario and may not be followed by radiology on many occasions. On cytology, gynecomastia yields fat mixed aspirate and smears show scattered clusters of monomorphic epithelial cells with occasional myoepithelial cell in background. Imaging findings of breast abscess can mimic gynecomastia on mammography and may mimic malignancy on sonography. Usually, gynecomastia appears as a circumscribed discoid or triangular hypoechoic area located in the retroareolar region of the breast.[8] Rarely, microcalcifications in abscess can appear suspicious and mimic malignancy.[9] Most cases of subareolar breast abscess are unilateral, but rare cases can be bilateral also. The history of nipple discharge may or may not be elicited. These abscesses are treated with antibiotic therapy as per the culture and sensitivity report and surgical intervention may be required in persistent cases.[10] Ziehl–Neelsen stain for acid-fast bacilli should be performed in all inflammatory breast aspirates as mycobacterium can be a causative organism of breast abscess in Indian setup.

Conclusion

Breast abscess in male is a rare condition which can be confused with gynecomastia and malignancy on radiological imaging. This lesion can be suspected with careful clinical evaluation and can be diagnosed accurately with FNAC along with culture and special stains to pinpoint the causative organism.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Singh R, Anshu, Sharma SM, Gangane N. Spectrum of male breast lesions diagnosed by fine needle aspiration cytology: A 5-year experience at a tertiary care rural hospital in central India. Diagn Cytopathol 2012;40:113-7.
2. Sinha RK, Sinha MK, Gaurav K, Kumar A. Idiopathic bilateral male breast abscess. BMJ Case Rep 2014;2014. pii: bcr2013202169.
3. Mahendiran SA, Leibman AJ, Kommehl AS. Male breast abscess secondary to actinomycosis: A Case report. J Clin Diagn Res 2016;10:TD05-7.
4. Shukla S, Kishore M, Pahuja S, Meena R. Subareolar breast abscess in male: A rare presentation. Ann Pathol Lab Med 2016;3;L5-6.
5. Jaideep C, Kumar M, Khanna AK. Male breast tuberculosis. Postgrad Med J 1997;73:428-9.
6. Ursavaş A, Ege E, Bilgen OF, Taşdelen I, Coskun F, Sönmez S, *et al.* Breast and osteoarticular tuberculosis in a male patient. Diagn Microbiol Infect Dis 2007;58:477-9.
7. Brncic N, Gorup L, Strcic M, Abram M, Mustac E. Breast abscess in a man due to salmonella enterica serotype enteritidis. J Clin Microbiol 2012;50:192-3.
8. Yitta S, Singer CI, Toth HB, Mercado CL. Image presentation. Sonographic appearances of benign and malignant male breast disease with mammographic and pathologic correlation. J Ultrasound Med 2010;29:931-47.
9. Aiyappan SK, Ranga U, Veeraiyan S. Idiopathic subareolar breast abscess in a male patient. J Clin Diagn Res 2015;9:TJ01.
10. Yanai A, Hirabayashi S, Ueda K, Okabe K. Treatment of recurrent subareolar abscess. Ann Plast Surg 1987;18:314-8.