

Case Report

Love Bite Causing a Sub-areolar Breast Abscess: A Rare Case Report

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Abstract: A Sub-areolar abscess is a rare clinical entity, usually affecting young, non-lactating women. Along with the clinical assessment, an ultrasound some time is helpful in its diagnosis and differentiation from malignancy, however, a mammogram is not sensitive for this purpose. We present 18 year old female newly married who presented with right sub-areolar abscess which developed after a love bite by her husband during intense sexual encounter.

Keywords: Breast abscess, areolar, ultrasound

INTRODUCTION

Breast abscess is a localized pocket of infection containing pus tissue; that commonly affects women of reproductive years with age ranging from 18-50 years. It can be divided into 2 types; lactation and non-lactation infection. It can affect overlying skin as a primary event or secondary to a lesion such as sebaceous cyst. The organisms commonly causing non lactating infection includes Staphylococcus aureus, enterococci, bacteroids, anaerobic streptococci, and occasionally fungi [1]. Montgomery or areolar glands lie just below the surface of the areola, their function is lubrication during lactation. These glands can be blocked resulting in abscess formation in non lactating women of usually the young age group [2].

CASE REPORT

18 year old newly married woman was referred to the department of surgery with the chief complaint of a painful swelling in her right breast, peri-areolar region for about 20 days. The patient denied nipple discharge or constitutional symptoms. Her menarche was at the age of 12 years; has irregular period, no cyclical breast pain or tenderness. She denied any systemic disease; or medical treatment. She reported no family history of breast or ovarian cancer. On taking further history the patient was bitten over right areola by her husband on first night of her honeymoon. Next day she developed a painful swelling over the right areola she got treatment from unqualified physician at village which offered no relief.

On local physical examination, right breast was enlarged; there was an area of erythema 3x3 cms over right areola (Fig. 1). On palpation, a tender lump was felt in the right breast subareolar region. Right axilla showed no lymph node enlargement. The left breast was absolutely normal (Fig. 2). Ultrasound demonstrated at 6 o' clock position to 10 o' clock position, an ill-defined 6x4 cms, lobulated, thick walled fluid collection, with posterior enhancement, edge

shadowing increased echoes in its wall and the surrounding tissues on power Doppler study. The surrounding breast tissues showed increased echogenicity due to edema along with hypo echoic, focal overlying skin thickening (0.5 cm). But it showed no fistula connection with the skin nor there was tracking into the underlying breast tissue. No dilated duct any other lesion was seen. The image (Fig. 3) was suggestive of a subareolar abscess. On aspiration with 20 ml syringe about 50 ml of thick pus was aspirated and she was put on antibiotics and pain killers. The swelling subsided in eight day and follow-up after one month showed no swelling over right breast.



Fig. 1: Showing right sub-areolar abscess



Fig. 2: Showing enlarged right breast with sub-areolar abscess. The left breast is absolutely normal.



Fig. 3: USG showing a hypoechoic area in the right sub-areola

DISCUSSION

The main concern of most of the women presenting with breast symptoms, including lumps, is likelihood of cancer, however, most breast masses are benign including fibroadenomas, fibrocystic condition, intraductal papilloma and breast abscesses [1, 3]. Non-lactating infection can be separated into those occurring centrally in the periareolar region and those affecting the periareolar breast tissues. The latter one is common and usually associated with other underlying conditions, like diabetes mellitus, rheumatoid arthritis, steroid therapy, granulomatous lobular mastitis and trauma [3]. Subareolar abscess, having no association with an underlying risk factor as the indexed patient. Periareolar infection is most commonly seen in young women with a mean age of 32 years. Histologically there is active inflammation around a nondilated duct termed as periductal mastitis [3]. Nipple / subareolar abscess is a particular manifestation of central breast infection. It is a localized collection of pus in the retro areola area or 1

cms from the areola. We can say that the reported patient presented with the classical history and location of a subareolar abscess. It is also known as ZUSKA's disease, lactiferous fistula or subareolar gland disease [4, 5].

Central abscess frequently causes nipple discharge [4] but not seen in the presented case, the patient presented with pain and a tender swelling in the right breast peri-areolar region. These are typical clinical presenting features of a subareolar abscess; others include pus or discharge emerging from the swollen tissue, fever, a general feeling of illness similar to flu like symptoms [3], which was not seen in this case. Even though imaging studies are frequently undertaken to rule out malignancy, mammography and ultrasound of breast abscesses are not always conclusive. A breast abscess is likely to appear on a mammogram, as an ill-defined mass, typically with some areas of increased density and distortion. These types of features cannot be confidently differentiated from breast cancer lesions. Mammogram is also less sensitive for its diagnosis in young women and those with dense breast tissue [5]. For that reason only ultrasound was requested for the present case.

The goal of imaging studies is to rule out carcinoma and to avoid unnecessary major surgery. Ultrasound can help to distinguish between an abscess and breast cancer. Breast cancer usually will show on ultrasound as an irregular hypoechoic mass that may or may not have posterior acoustic shadowing. A breast abscess will usually show on ultrasound as an ill-defined, echogenic mass with central, irregular hypoechoic area or septations. It may or may not cause posterior acoustic enhancement, though depending upon the location of the abscess, the sonogram may not always give a clear picture, e.g. When the abscess is located right under the nipple, the abscess might not show up at all on ultrasound and this might be a situation where MRI is used to provide a more comprehensive view of the lesion. However, generally, conventional imaging is usually sufficient and MRI not indicated [5, 6]. The ultrasound of the presented case demonstrated the lesion. The lesion was oval, parallel to the skin and cystic, giving a benign impression, however, being ill-defined with mural thickening and hyperemia, a simple cyst was excluded and picture was concluded to be more in favor of a complicated cyst. The case was classified as probably benign. Taking in consideration the clinical picture raising the possibility of a subareolar abscess. Differential diagnoses included fibrocystic changes, but no other cysts or ductal dilatation were found in the same or the contra lateral breast. The lesion did not give a typical picture of a breast cancer on ultrasound and the history was not suggestive too however, a sonographic follow-up may be suggested after treatment to exclude the remote possibility of infection on top of carcinoma.

The lesion was aspirated and the patient was treated conservatively with course of antibiotics and pain killers. After one month from the earlier, the follow-up ultrasound showed complete resolution with normal breast tissue showing no residual change. A refractory abscess should be treated by surgical drainage [2, 4, 6]. In recurrent cases, surgical removal of the affected glands is effective [6, 7].

CONCLUSION

Subareolar breast abscess although rare is a troublesome condition, causes prolonged morbidity and tend to have a chronic, recurring nature. Because the affected patients are usually young women, deformation of the nipple and areola that accompanies the disease is also distressing [8]. It is also difficult to fully assess the lesion by conventional radiologic examinations such as mammography and sometime sonography therefore deserves increased attention.

REFERENCES

1. Dixon JM; ABC of breast diseases. Breast infection. *BMJ*, 1994; 309 (6959): 946-949.
2. High-resolution MRI in detecting subareolar breast abscess. *AJR* 2007; 188(6): 1568-1572.
3. Dixon JM; Outpatient treatment of non-lactational breast abscesses. *Br J Surg.*, 1992; 79(1): 56-57.
4. Costa DD, Taddese A, Cure ML, Gerson D, Poppiti Jr R, Esserman L; Common and unusual disease of the nipple areolar complex. *Radiographics*, 2007; 27: 56-77.
5. Oisen ML, Dilaven C; Idiopathic granulomatous mastitis. *BMJ case report*, 2011; 4271.
6. Yanai A, Hirabayashi S, Ueda K, Okabe K; Treatment of recurrent subareolar abscess. *Ann Plast Surg* 1987; 18: 314-318.
7. Meguid MM, Oler A, Numann PJ, Khan S; Pathogenesis-based treatment of recurring subareolar breast abscesses. *Surgery* 1995; 118:775-782.
8. Fu P, Kurihara Y, Kanemaki Y, Okamoto K, Nakajima Y, Fukuda M, Maeda I; High-Resolution MRI in Detecting Subareolar Breast Abscess, *American Journal of Roentgenology*, 2007; 188(6): 1568-1572.