IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 15, Issue 12 Ver. V (December. 2016), PP 15-18
www.iosrjournals.org

Epidermal Inclusion Cyst: A rare cause of unilateral male breast enlargement

Debadutta Senapati[1], Srikrishnaditya Manne[2], Taraka Krishna Nulukurthi[3], Akshapada Pattanaik[4]

[1](General Surgery, SCB Medical College & Hospital, India)
[2](General Surgery, Konaseema Institute of Medical Sciences & Research Foundation, India)
[3](General Surgery, Konaseema Institute of Medical Sciences & Research Foundation. India)
[4](General Surgery, SCB Medical College & Hospital, India)

Abstract: *We report a case of unilateral breast enlargement in a young male patient from an epidermal inclusion cyst of breast (EICB). EICB leading to breast enlargement can be psychologically disturbing in a male for which the patient seeks treatment. Careful history and physical examination along with imaging and cytology studies are important to rule out other causes of unilateral breast enlargement, especially malignancy. Excision of the cyst and histopathology of the specimen is required for treatment and ruling out other causes.*
Keywords: *Breast, Cyst, Gynecomastia, Inclusion, Swelling*

I. Case Presentation

A 28-year old male patient who is a security guard by profession presented to us complaining of enlargement of right breast for 3 years gradually progressing over the time to attain its present size. He had no history of any pain, skin changes or nipple discharge but the cosmetic disfigurement was the prime reason for which he decided to seek medical advice. Patient is non-alcoholic, non-smoker with no past history of medication, any surgery, liver disease, renal disease, or any traumatic injury.

On examination patient was normally built and was afebrile. On local examination, there was enlargement of right side breast and there was no associated nipple discharge or skin change (fig 1). Both axillae were normal with normal axillary hair pattern. On palpation, a non-tender swelling was palpable in the right breast of size 5cm in diameter present immediately posterior to the nipple-areolar complex. The swelling was firm in consistency with limited mobility. The swelling was not attached to the underlying pectoralis muscle. There was no axillary lymphadenopathy. Examination of abdomen was normal. Testes were normal in size and volume and were found in the scrotum.

II. Investigations

On investigation, complete blood picture, liver function tests, renal function tests, thyroid function tests were normal. Sex hormone studies showed normal androgen levels and estrogen levels were not raised. Ultrasound of abdomen and ultrasound of scrotum revealed no abnormalities. Ultrasound of both breasts with high-frequency 12MHz probe showed well defined thick walled soft tissue mass of approximately 48mm x 22mm x 46mm size seen in right breast centrally with small irregular grossly hypoechoic to cystic foci within. No calcifications were seen, mass is avascular and superficial to the pectoralis muscle (fig 2). Fine needle aspirate showed thick pultaceousmaterial with few anucleated squamous and nucleated benign squamous cells. No other features suggestive of malignancy were noted.

Differential Diagnosis

Fibroadenoma, ductal squamous metaplasia, Phyllodes tumor, carcinoma of breast

Treatment

Under general anaesthesia, a curvilinear incision was given over the swelling in the right breast and the cyst was found lying behind the nipple-areolar complex (fig 3). The cyst was dissected out and the wound closed with staplers. The cyst was found to have regular margins and smooth surface (fig 4) and contained thick foul-smelling pultaceous material (fig 5).

Outcome And Follow-Up

The patient had an uneventful recovery and the histopathology came out to be epidermal inclusion cyst.

III. Discussion

Unilateral male breast enlargement is a concern of psychological distress and cosmetic concern for the patient and it carries a significant risk of malignancy which makes it important from a surgical point of view. Medical literature regarding male breast enlargement has enumerated important causes for the condition that includes conditions like gynecomastia, pseudogynecomastia, benign swellings (e.g. epidermal inclusion cyst, lipoma, hematoma, fat necrosis) and more sinister pathology like malignancy.[1] epidermal inclusion cysts constitute a rare cause of unilateral breast enlargement and is thought to develop from damage to epidermis which gets implanted deep within the breast tissue (congenital cyst secondary to obstructed hair follicles, trauma, reduction mammoplasty, needle biopsy).[4-6] Another mechanism that can lead to EICB is due to squamous metaplasia of ductal epithelium.[7] Breast has flexible fat and mammary gland tissue under its skin, thus EICB grows deep inside the subcutaneous tissue and is difficult to distinguish from a breast tumor.[8] Careful history regarding the onset and duration of the illness should be enquired into and history regarding associated symptoms of pain, skin changes and nipple discharge should be obtained. History regarding any medication or drug use, medical illnesses or previous surgeries is important. Physical examination should include, other than the breast, the genitalia, abdomen, lymph nodes and thyroid. There may be enlargement of breast with an underlying firm, rounded, non-tender swelling in the breast and features of malignancy should be carefully looked for. Investigations include ultrasonography, mammography and fine-needle aspiration cytology (FNAC), features suspicious of malignancy should be considered for a more radical approach in management in the line of breast malignancy. Any features of systemic illness or hormonal changes should prompt a workup in that direction. Previous studies have underlined the rare nature of EICB in male patients and a simple surgical excision of the lesion and biopsy can rule out an underlying malignant growth.[9-11]

Learning Points/Take Home Messages

- Unilateral enlargement of breast in males can be psychologically distressing.
- EICB is a rare cause of unilateral breast enlargement in males.
- Other causes of male breast enlargement should be excluded including malignancy.
- Ultrasonography, mammography and FNAC are important for diagnosis.
- Excision of the cyst and histopathology study can be confirmatory in ruling out malignancy.

References

[1]. Gynecomastia. Dickson G,*Am Fam Physician.* 2012 Apr 1;85(7):716-722.
[2]. Crystal P, Shaco-Levy R. Concentric rings within a breast mass on sonography: lamellated keratin in an epidermal inclusion cyst. *AJR Am J Roentgenol*. 2005;184:S47–8.
[3]. Beromann-Koester CU, Kolberg HC, Rudolf I, Krueger S, Gellisen J, Stoeckelhuber BM. Epidermal cyst of the breast mimicking malignancy: clinical, radiological and histological correlation.*ArchGynecol Obstet.* 2006;273(5):312–314.
[4]. Gerlock AJ. Epidermal Inclusion cyst of the breast associated with needle aspiration biopsy.*Radiology.* 1974;112:69–70.
[5]. Davies JD, Nonni A, D'Costa HF. Mammary epidermoid inclusion cysts after wide-core needle biopsies. *Histopathology*. 1997;31:549–51.
[6]. Fajardo LL, Bessen SC. Epidermal inclusion cyst after reduction mammoplasty. *Radiology*.1993;186:103–6.
[7]. Chantra PK, Tnag JT, Stanley TM, Bassett LW. Circumscribed fibrocystic mastopathy with formation of an epidermal cyst. *AJR Am J Roentgenol*. 1994;163:831–2.
[8]. Singh M, Maheshwari B, Khurana N, Jain S. Epidermal Inclusion cyst in breast: is it so rare? *J Cytol*. 2012 Jul-Sep; 29(3): 169–172.
[9]. Das DK, Juniad TA, Mathews SB, Ajrawi TG, Ahmed MS, Madda JP, et al. Fine needle aspiration cytology diagnosis of male breast lesions: A study of 185 cases. *ActaCytol*. 1995;39:870–6.
[10]. Kapila K, Verma K. Fine needle aspiration cytology of epidermal inclusion cysts in the male breast.*ActaCytol*. 2003;47:315–7.
[11]. Lilleng R, Pakosy N, Vural G, langmark F, Hagmar B. Asessment of fine needle aspiration cytology and histopathology for diagnosing male breast masses. *ActaCytol*. 1995;39:877–81.

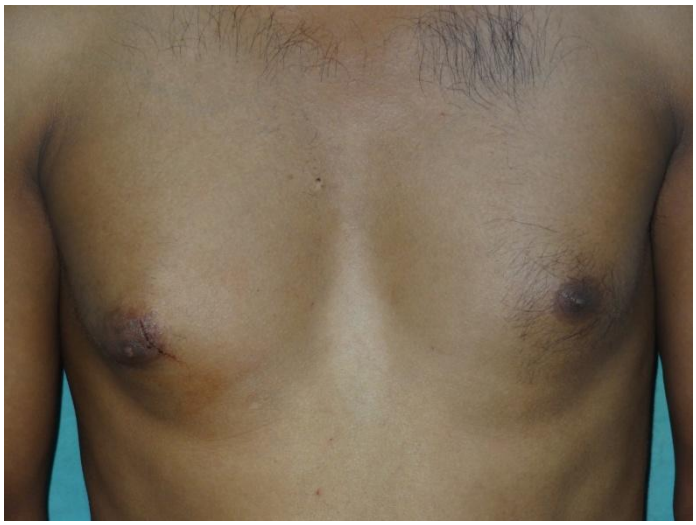

Figure 1: Enlargement of the right breast.

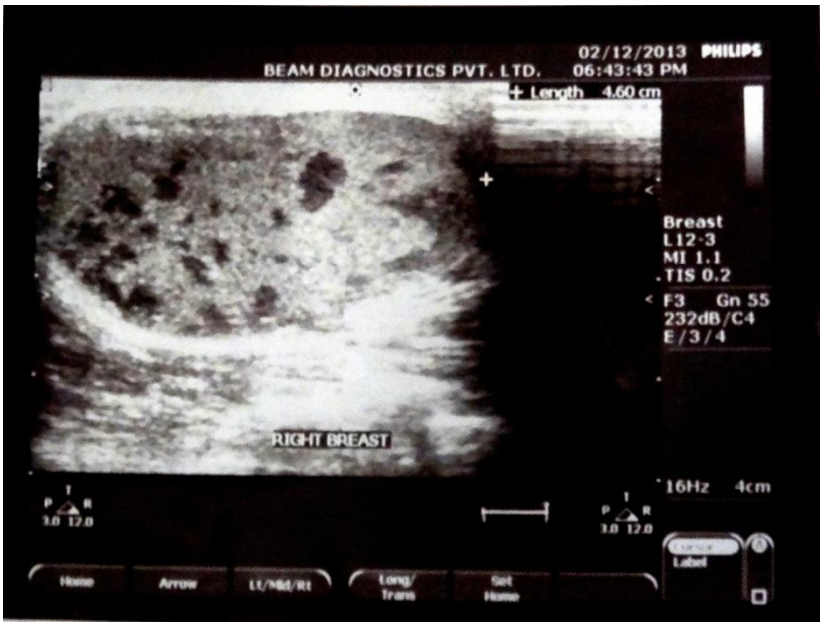

Figure 2: Ultrasonographic findings of hypoechoic to cystic foci without any calcifications.

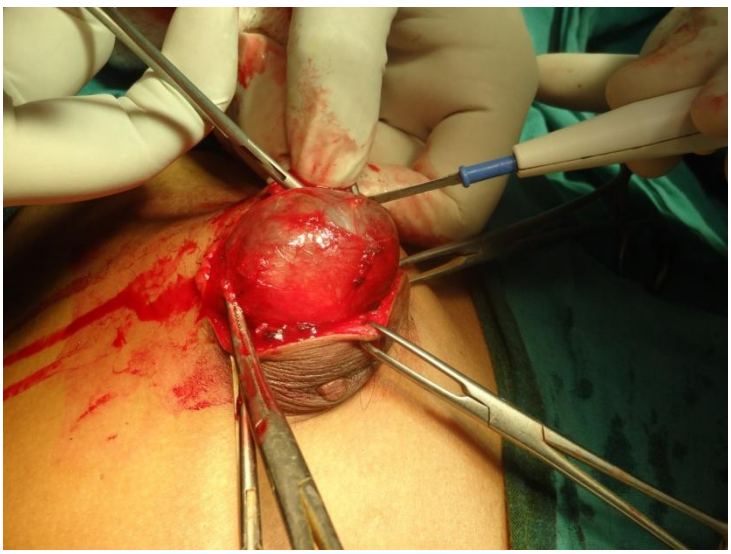

Figure 3: Cyst lying posterior to nipple-areolar complex.

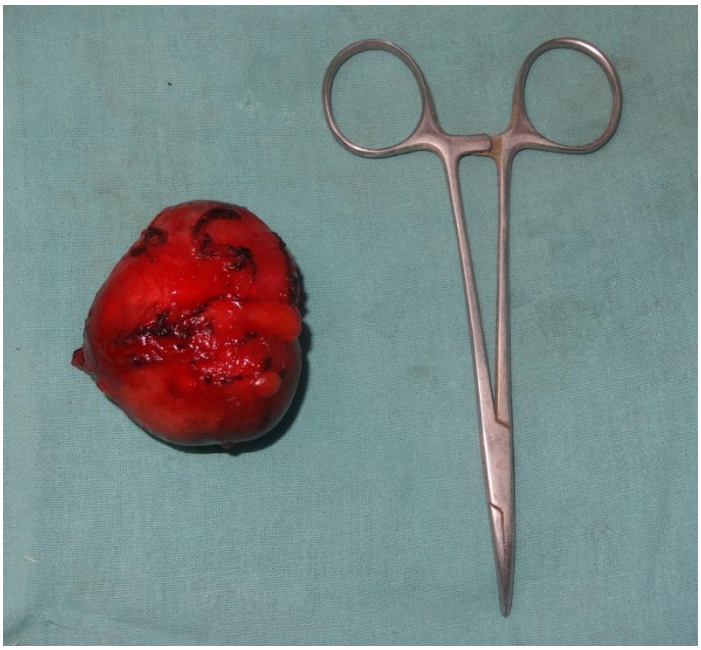

Figure 4: Excised specimen of epidermal inclusion cyst of breast

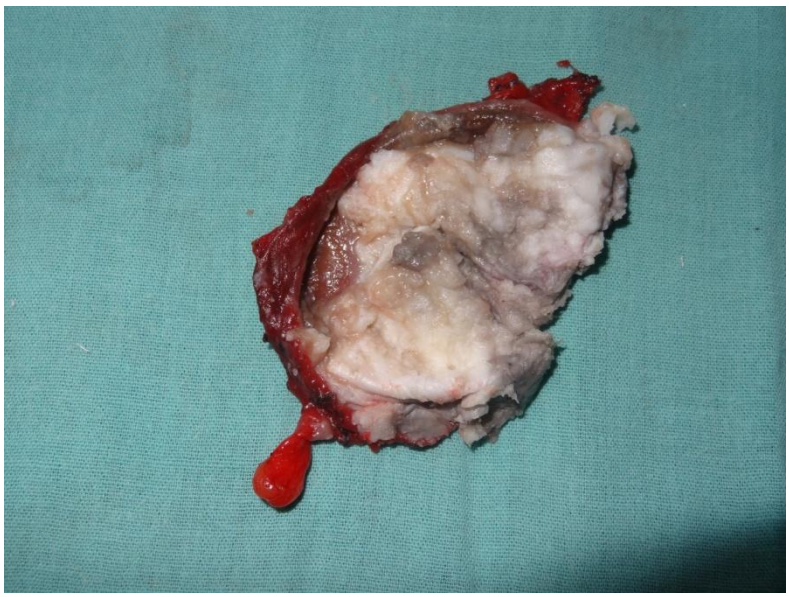

Figure 5: Cyst containing thick, pultaceous material.