



## A Breast Epidermoid Cyst with the Presentation of Gynecomastia

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### Abstract

Epidermoid cyst is a benign cyst which its common locations are face, scalp, trunk and back and other tissues like breast parenchyma is a rare location for its occurrence. In this paper, we are proud to present a rare condition which has been reported less than 10 cases at most. The case we introduce is a 30 year-old man with an epidermoid cyst in his right breast with presentation of an unilateral gynecomastia.

### Introduction

An epidermoid cyst is a benign cyst with pilosebaceous origin and also referred as sebaceous cyst. Face, scalp, back and trunk are the most common areas for epidermoid cyst respectively. Breast paranchima is one of the rare locations for its occurrence while existing in a male breast with presentation of unilateral gynecomastia is extremely rare which we are proud to present [1,2]. Gynecomastia is a benign enlargement of the male breasts with different rate of prevalence in any age. The most prevalence rate is in newborns which is about 60%-90%. The estrogen that passes through the placenta during pregnancy is the actual cause of this condition which is called transient palpable breast tissue. Gynecomastia also presents in puberty which is between 4-69% and over 50 adolescents [3-8]. There are numbers of theories that explain the gynecomastia etiology including an imbalance between estrogen actions which is affected by androgen action and increasing in HCG (human chorionic gonadotropin) receptors and LH (luteinizing hormone) in male breasts [9-12].

### Case Presentation

A 30 year-old man with right gynecomastia was referred to the clinic affiliated to Department of Plastic and Reconstructive surgery Panzdah-e-Khordad hospital, Shahid Beheshti university of medical science, Tehran. Iran in 2016. His past medical history was clear and no significant diseases, surgery or any kind of a trauma was existed. He had no history of drug using or addiction, drinking, medications and smoking. He complained about his right breast enlargement from cosmetic point of view. He did not mentioned any tenderness, bleeding, discharge or sensation of warmth around the affected area. In physical examination we found a palpable mass with a slight erythematic which we figured it might be a presentation of gynecomastia (Figure 1 and 2). In laboratory findings, liver function tests was normal. The beta HCG was in a normal range and there was no abnormalities in AFP (alpha-fetoprotein) level and the whole hormone profile was normal. He had no irregularities in karyotype testing and he has a completely normal male cytogeny. As the sonography results were came in, a 3×4 cm mass was reported in the right breast. We considered a surgery for treatment and used periareolar technique for the mass excision which had no scars left and the patient was completely satisfied (Figure 3 and 4). We sent the mass for pathological evaluation and as we expected, the epidermoid cyst was approved (Figure 5).

### Discussion

As it mentioned before, epidermoid cyst in breast parenchyma is a rare condition and when it occurs in a male breast with presentation of unilateral gynecomastia, it becomes extremely rare.

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Received Date: 19 Dec 2016

Accepted Date: 09 Mar 2017

Published Date: 22 Mar 2017

#### Citation:

Tarahomi M, Otaghvar HA, Shojaei D,  
Molaei A, Azhdari K, Mahmoodvand  
H. A Breast Epidermoid Cyst with the  
Presentation of Gynecomastia. Clin  
Surg. 2017; 2: 1362.

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Figure 1.

Figure 2.

Figure 1 and 2: Presentation of gynecomastia.



Figure 3.

Figure 4.

Figure 3 and 4: Using periareolar technique for the mass excision which had no scars left and the patient was completely satisfied.

There have been introduced only 5 cases till 2014 [13]. In 2016, Dr. S K Kalambe reported a 45 year-old male with bilateral epidermoid cyst with mimicking of breast lumps [14]. The size variation of the epidermoid cyst is between 0.5 to 5 cm whilst those cysts which are bigger than 5 cm could be called sebaceous cysts. The third and fourth decades of adolescence is the most period for presenting this condition which our presenting case also approves [15-17]. There are some theories that explain the etiology of epidermoid cysts including: sequestration of epidermal rests during embryonic life, pilosebaceous unit occlusion, traumatic or surgical epithelial elements implantation, HPV infection, insect bite, surgery, reduction mammoplasty or breast augmentation, needle biopsy and ultraviolet exposure and here also is congenital form [15-22]. Epidermoid cysts may present with inflammation, swelling and tenderness and infected secondarily but they are usually asymptomatic. Malignant epidermoid cysts are very uncommon but there is a possibility for them and the most common malignancy that they can cause BCC (Basal Cell Carcinoma), bone disease and SCC respectively. In case of a becoming malignancy, bleeding, friability and rapid growth may be seen [23]. Although our patient had none of these risk factors. There are plenty of differential diagnosis of male breast enlargement such as gynecomastia, lipoma, epidermoid cysts, Pseudoangiomatous Stromal Hyperplasia (PASH), intraductal papilloma, subareolar abscess, hematoma, and very rarely fibroadenoma. And Invasive Ductal Carcinoma, Papillary Carcinoma, rarely Primary lymphoma of breast are the malignant causes of male breast lumps [24]. The possible imaging is consist of radiography, ultrasound and mammography. In chest radiography a shadow of a soft tissue and absence of calcification may be seen. Lamellated keratin with alternating concentric hyperechoic and hypoechoic rings will make an onion skin pattern in sonography [25]. It is safe to say that, taking a biopsy of the cyst may rule out the possible malignancies.



Figure 5: Epidermoid cyst.

## Conclusion

In conclusion, although the size of the breast enlargement should be considered and gynecomastia is one of the first diagnosis of this condition but we should always be aware of the other possibilities, even the extremely rare ones. The aim of this article was highlighting the fact that epidermoid cysts should be kept in differential diagnosis of male breast enlargement.

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