

# Epidermoid Cyst of the Breast - Uncommon Site

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**Abstract:** Epidermoid cyst of the breast is a rare condition; however a common finding in other parts of the body and most commonly located in the scalp, back, and neck. Only a few cases of epidermal cysts of the breast have been reported in literature. Epidermal cyst is nonmalignant proliferations of squamous epithelium situated within the dermis. We have discussed in this case report one such case.

This case report aims to identify rare in breast such a common lesion otherwise by means of radiological and histopathological investigation and differentiat from other lesion of breast.

➤ **Case Report:**

40 year female patient with lump in left side of breast since 25 years with gradually progressive to current size, examination show firm lesion in left side breast outer quadrant not associated with other symptoms. FNAC suggestive of epidermoid cyst with ultrasound shows heterogeneous well define lesion.

➤ **Conclusion:**

An epidermoid cyst presenting in breast as a lump should be differntiated from other bening breast lesion with investigation.

**Keywords:** Breast, Keratinous Cyst, Epidermoid Cyst, Epidermal Inclusion Cyst, Rare Site.

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## I. INTRODUCTION

Epidermoid cyst arising from the breast is a rare and bening condition which can be misdiagnosed clinically. One kind of pilosebaceous adnexal tumor is the epidermoid cyst. It is sometimes referred to as an epidermoid or keratinous cyst. These cysts are most frequently found on the scalp, neck, and back, but they are extremely uncommon and rare in the skin and parenchyma of the breasts. The English-language literature has only documented less than 40 cases of breast epidermal inclusion cysts.

It is necessary to distinguish between benign or malignant breast tumors and large cysts in the breast parenchyma. Clinical misdiagnosis of breast epidermal cysts is relatively unusual. The current case's histological diagnosis of an epidermal inclusion cyst was unexpected.

This cyst's primary causes are thought to be congenital, traumatic, and surgical (iatrogenic). Proposed mechanisms include obstruction of pilosebaceous units with progressive keratine accumulation less commonly congenital inclusion of squamous epithelium during embryologic development.

They may also be metaplastic lesions, where the breast's typical columnar cells change into squamous cells. A unique granular layer, lamellated keratin without calcification, and a cornified epithelium line the epidermal inclusion cyst. On rare occasions, a benign breast condition may cause the tissue differentiation. It has a potential risk to undergo infection and malignancy.

When an epidermoid cyst appears on a mammogram as a uniformly dense, well-circumscribed mass, it may be distinguished from breast cancer. They can resemble malignant lesions, and there have been reports of some cases that may be

malignant.

We report the case of 40-year-old female patient with chronic breast lump radiological and histopathological investigation confirm the epidermoid cyst of breast.

## II. CASE HISTORY

A 40-year-old woman complained of a swelling in her left breast that had been there for 25 years. The swelling started softly and grew larger over time. Over the past 15 days, there has been a history of pain related to the swelling on compression only that was unrelated to any fever, cough, trauma, regression or abrupt size increase, redness, or nipple discharge.

A solitary, oval swelling measuring 6 cm by 5 cm was found in the lower outer quadrant of the left breast upon local inspection. The areola and nipple exhibited inferolateral deviation. The skin above the swelling was bluish in color and rest breast skin is normal. It was soft, smooth, noncompressible, and not fixed to the chest wall and pectoralis major muscle. No history of nipple discharge. Both axilla and the opposite breast were normal. The results of the systemic evaluation were within normal limits. Clinically, it was identified as a breast tissue-derived cystic lesion.

Breast sonography revealed a hypochoic, clearly defined, smoothly delineated mass lesion in the breast parenchyma's fat plane. A keratinous cyst was suggested by fine needle aspiration cytology (FNAC), which revealed isolated anucleate squamous cells and tiny groups against a keratinous background without any breast tissue.

The patient was posted for excision of the lump. White glistening thick walled cyst was excised completely with preservation of nipple and areola. Histopathology confirmed the diagnosis of keratinous cyst. At 1 month follow up after the surgery, patient is doing well.



Fig 1 Clinical Picture



Fig 2 Left Breast Ultrasound -Heterogeneous Echogenic Nodule with Well Define Margin and no Vascularity on Color Doppler

## III. DISCUSSION

An adnexal tumor of pilosebaceous origin, the epidermoid cyst was formerly known as cyst of follicular infundibulum, or epidermoid inclusion cyst. It is an uncommon breast parenchymal disorder. Epidermal inclusion cysts are thought to be the cause of breast epidermal cysts. Their development is explained by a number of ideas. Initially, they may arise from blocked hair follicles.

Second, they could be consequence of trauma, like reduction mammoplasty or breast needle biopsy, which could result in deep infiltration of the breast tissue with ripped pieces of the epidermis.

Third, they may result from squamous metaplasia of normal columnar cells in an ectatic duct in a fibroadenoma or fibrocystic illness. An epidermal inclusion cyst can be distinguished from breast cancer on mammography because it shows up as a homogeneous, well-circumscribed density. The pathologic characteristics of lamellated keratin are represented by the breast epidermoid cyst's distinctive onion-ring look on sonography, which alternates concentric hyperechoic and hypoechoic rings.

It can be differentiated from other benign lesions like fibroadenoma or phyllodes tumor thanks to these characteristics. The discovery of a solid lesion on sonography may necessitate tissue diagnosis in order to rule out a cancer with clearly defined borders, even in cases where the mammographic appearance of a palpable mass is consistent with a benign lesion.

Despite being benign, epidermal inclusion cysts can occasionally contribute to the development of breast squamous carcinoma. Only 0.045% of common epidermal inclusion cyst walls develop squamous cell carcinoma. Menville et al. found that out of 36 cases of epidermal inclusion cysts, 29 were benign and 7 (19%) were malignant. However, it is unknown how frequently malignant changes occur in epidermal inclusion cysts. Additionally, they are linked to calcifications (microcalcifications).

Excision biopsy is advised due to association with malignant potential and complications (rupture, abscess), as well as mammographic and sonographic features that may resemble a malignancy.

We planned surgical excision of epidermoid cyst of left breast by putting nipple sparing elliptical incision over cyst and excised completely from breast parenchyma and proper closure was done . specimen was sent for histopathological examination .on follow up patient was doing good.



Fig 3 Post-Operative Picture



Fig 4 Gross Specimen

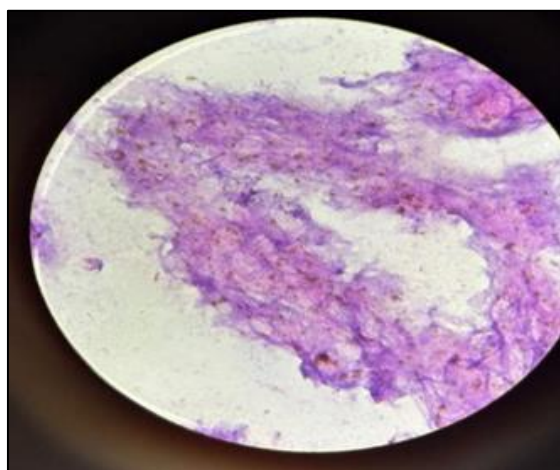


Fig 5 H and E Staining

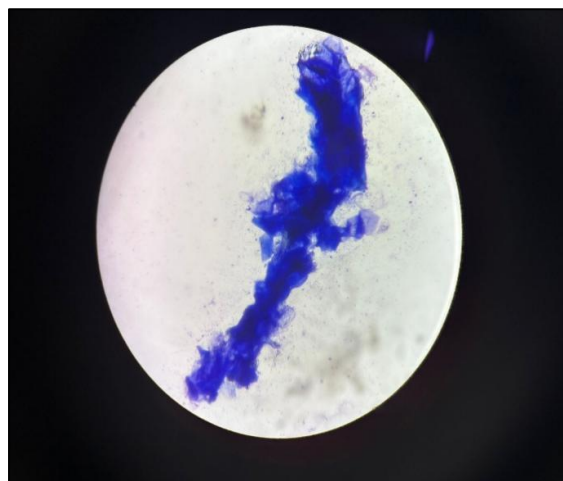


Fig 6 Giemsa Staining

Histological examination with different staining shows abundant keratin lamellae with cyst wall lining squamous epithelium with normal breast parenchyma, no evidence of malignancy noted

#### IV. CONCLUSION

An epidermoid cyst of breast is uncommon, rarely it may go into malignancy .it is important to distinguish them from benign or malignant breast tumors. In a clinical setting, they can resemble both benign and malignant tumors. Excision is likely the best course of action because it removes the potential risk of rupture, abscess formation, malignant transformation, and lump malignancy. Surgery and histological analysis is gold standard for diagnosis and treatment of epidermoid cysts.

➤ *Registration of Research Studies-*  
NA

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