

A Case report of a rare large keratinous Cyst of the Breast

Badkur Mayank¹, Jain Ajay¹, Singh Yogendra¹

¹(Department Of Surgery, People's College Of Medical Sciences And Research Centre, Bhopal, M P, India)

Abstract:

Background: Epidermal 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.

Case Report: The 56 years old female patient presented with a large lump in right breast. FNAC was suggestive of keratinous cyst. Excision biopsy was done and Histology showed an epidermal/ keratinous cyst. To the best of our knowledge this is the largest epidermoid cyst in a female ever reported in Indian literature.

Conclusion: Epidermal inclusion cyst of the breast is an uncommon benign lesion. Diagnosis can be made with ultrasonography, mammography, and biopsy. When found excisional biopsy should be done to avoid complication like infection or malignant transformation.

Patient consent is obtained.

Keywords: breast lump, keratinous Cyst, epidermoid cyst

I. Introduction:

The epidermoid cyst is a type of adnexal tumor of pilosebaceous origin. [1] It is also called as keratinous cyst or epidermoid cyst.[4] Such cysts most commonly occur on the scalp and in the skin of the neck and back, whereas occurrence of these cysts in breast skin and parenchyma is very rare.[1] Only fewer than 40 cases of epidermal inclusion cysts of the breast have been reported in the English-language literature. Large cysts in the breast parenchyma require to be differentiated from malignant or benign tumors of the breast.[2] It is not uncommon that breast epidermal cysts are misdiagnosed clinically. The present case of epidermal inclusion cyst was a surprise histopathological diagnosis. The origin of this cyst is considered mainly congenital, traumatic and surgery (iatrogenic). [1] They can also be metaplastic lesions in which the usual columnar cells of the breast transform to squamous cells. Epidermal inclusion cyst is lined by a cornified epithelium, and has a distinct granular layer, and contains lamellated keratin without calcification. Rarely, the tissue differentiation might come from a benign breast condition. An epidermoid cyst might be distinguishable from breast cancer while it presents as a well-circumscribed, homogeneous dense mass on the mammography. They can mimic malignant lesions and some cases with malignant potential have been reported.

II. Case History:

56 years old female presented with complain of lump in right breast since 8 years. Swelling was insidious in onset and slowly increased in the size. There was no history of pain, fever, cough or any trauma, regression or sudden increase in size, or any redness or nipple discharge.

Local examination revealed a single, oval swelling in upper inner quadrant of right breast measuring 10cms x 10 cms. Nipple and areola were deviated inferolaterally. Skin above the swelling was normal and not fixed. It was nontender, smooth, soft, noncompressible and also free from pectoralis major muscle and chest wall. There was no discharge from the nipple. Opposite breast and bilateral axilla were normal. Systemic examination was within normal limit. Clinically, it was diagnosed as a cystic lesion arising from the breast tissue.

Sonography of breast was suggestive of hypoechoic, well-defined smoothly outlined mass lesion in fat plane of breast parenchyma. Mammogram was not done as it was not available. Fine needle aspiration cytology (FNAC) showed small groups and isolated anucleate squamous cells against the keratinous background, without any breast tissue, suggestive of a keratinous cyst.

III. Management and Outcome:

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 3 months follow up after the surgery, patient is doing well.



IV. Discussion:

The epidermoid cyst (formerly called cyst of follicular infundibulum, epidermoid inclusion cyst, or sebaceous cyst) is a type of adnexal tumor of pilosebaceous origin. It is a rare condition of breast parenchyma.[1]

Epidermal cysts in the breast are believed to be epidermal inclusion cysts. There are multiple theories for their development. First, they can develop from obstructed hair follicles. Second, they may result from trauma, such as reduction mammoplasty or needle biopsy of the breast, which may cause torn fragments of the epidermis with the deep infiltration within the breast tissue. Third, they can be generated by squamous metaplasia of normal columnar cells within an ectatic duct in an area of fibrocystic disease or in a fibroadenoma.[2] On mammography, an epidermal inclusion cyst appears as a well-circumscribed, homogeneous density and thus is distinguishable from breast cancer.[1] On sonography, the breast epidermoid cyst shows a specific onion-ring appearance with alternating concentric hyperechoic and hypoechoic rings, which correspond to the pathologic features of lamellated keratin. These features make it distinguishable from other benign lesions such as fibroadenoma or phyllodes tumor. [1] In our case sonographic picture does not confirm this classic appearance so making the clinical diagnosis more uncertain. Even when the mammographic appearance of a palpable mass is consistent with a benign lesion, the finding of a solid lesion on sonography may require tissue diagnosis to exclude a carcinoma with well-defined borders.[2]



Although epidermal inclusion cysts are benign, occasionally they may play a role in the origin of squamous carcinoma of the breast. Squamous cell carcinoma develops only rarely (0.045%) in the wall of common epidermal inclusion cysts. In a study by Menville et al. 36 cases of epidermal inclusion cysts 29 of these epidermal cysts were benign and 7 (19%) were malignant. But the true incidence of malignant change in epidermal inclusion cysts is not known.[2] They are also associated with calcifications (microcalcifications).

Association with malignant potential and complications (rupture, abscess), and furthermore, mammographic and sonographic features which can mimic a malignancy,[5] because of these factors excision biopsy is recommended.

V. Conclusion:

An epidermal inclusion cyst of the breast is rare, and differentiation from a malignant or benign breast tumor is required. They may play a role in origin of the rare squamous carcinoma of the breast as suggested by Hasleton and colleagues. Clinically they can mimic benign as well as malignant tumor.[2] Excision is probably the most appropriate treatment, which eliminates the possible risk of malignancy in the lump, malignant transformation, rupture and abscess formation.

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Legends:

Fig. 1: lump in upper medial quadrant of right side breast

Fig. 2: specimen of excised lump