

Case Report

An Upsurge in Epidermal Cyst of the Breast: Three Common Benign Cases at Rare Site

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ABSTRACT

An epidermoid cyst is a common benign condition usually found on the skin which is ectodermal in origin. Several synonyms exist for epidermoid cysts, including epidermal cyst, epidermal inclusion cyst (EIC), infundibular cyst and keratin cyst. EIC more specifically refers to implantation of epidermal elements into the dermis.

Epidermal cyst of breast is an uncommon benign condition and is usually located in the skin layer. It refers to cysts resulting from the proliferation and implantation of epidermal elements within a circumscribed space in the dermis. These cysts are more common on the face, trunk, neck, extremities and scalp. The occurrence of epidermal cyst in the breast is rare. It presents as a small lump and needs to be differentiated from other non-neoplastic and neoplastic breast lesions. To date, fewer than 50 cases of epidermal inclusion cysts of the breast have been reported in the English-language literature. [1-6]

Diagnosis being forthright on histopathology for EIC that occur in the breast sub cutis as a small nodule, but enlarged cysts in the breast parenchyma require to be differentiated from malignant or benign tumors of the breast. In this article, three cases of epidermoid cyst of breast are presented.

Key words: Epidermoid cyst, Breast.

CASE REPORT

Case 1

A 40-year-old woman came with complaints of a lump in her left breast, since 2 and half months. It was initially a size of the pea and gradually increased in to the current size of a lemon. There were no complaints of nipple discharge, and the patient had no history of previous surgery or infection to the breast. No history of hormonal medications either oral contraceptive pills or positive family history of breast disease was obtained.

On examination, the lump was located at the upper inner quadrant of the left breast and measured approximately 3.0 cm×1.5 cm. It was firm, immobile and was fixed to the overlying skin. There was no

skin change, nipple retraction or enlarged axillary lymph nodes.

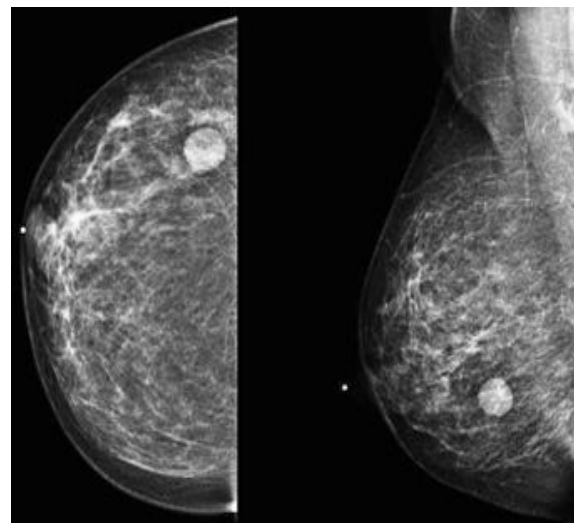


Figure 1: Mammogram images of the left breast (craniocaudal and mediolateral views) show a well-circumscribed, high density, oval-shaped lesion in the upper inner quadrant.

The mammogram showed a well-circumscribed, high-density oval lesion in the upper inner quadrant of the left breast (Fig.1). The opposite breast was normal.

The gross appearance of the specimen was an elliptical cystic lesion measuring 2.8 x 1.2cms, on cutting open, serous cyst contents oozed out. On Histopathological examination, presence of a cyst in the dermis, cyst was lined by stratified squamous epithelium underneath of which showed flakes of keratin. No malignancy was noted (Fig.2). The final diagnosis of an epidermal cyst was made.

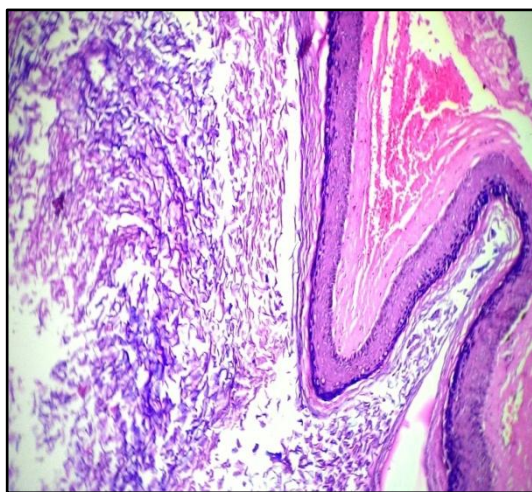


Figure 2: Cyst lined by stratified squamous epithelium underneath present is flakes of keratin. (H&E stain, 10x).

Case 2

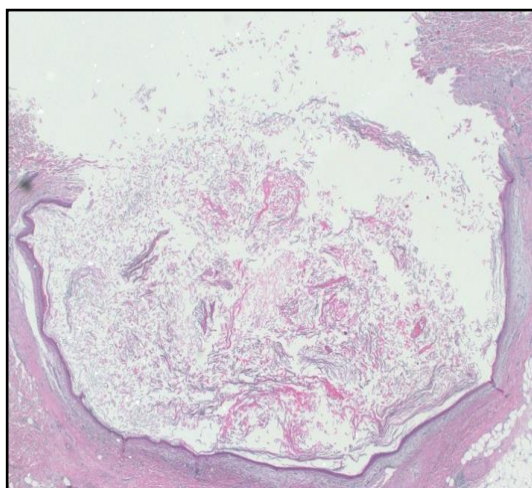


Figure 3: Cyst consisted of mature squamous epithelium and with the multiple layers of keratin (H&E stain, 10x).

A 48-year-old woman came with the complaint of a mass in her right breast. She gave history of 2 years since she first

noticed the mass and had history of hysterectomy due to uterine fibroid two years ago. Examination revealed a 3.5-cm lesion in the center of the right breast under the nipple region. On examination, the mass was firm and well-circumscribed. After excisional removal of mass, an epidermoid cyst was confirmed on histopathological examination (Fig. 3).

Case 3

A 30-year-old woman came with complains of lump in the lower outer quadrant of the left breast. It was small to start with and gradually increased to the present size measuring 3.5x2 cm, being firm in consistency and tender on touch. Grossly, the specimen measured 3x2cm, soft to firm and on cut opening pultaceous material oozed out.

On histopathology, the cyst was lined by stratified squamous epithelium. Underneath dermis showed lamellated flakes of keratin along with inflammatory cell infiltrate predominantly polymorphonuclear cell infiltrate and fibrocollagenous tissue. Thus, a diagnosis of Infected Epidermoid cyst of left breast was made (Fig. 4).

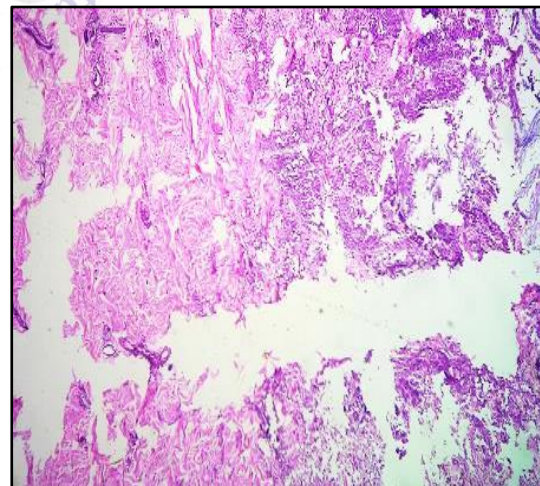


Figure 4: Cyst showed lamellated flakes of keratin along with inflammatory cell infiltrate predominantly polymorphonuclear cell infiltrate and fibrocollagenous tissue. (H&E stain, 10x).

DISCUSSION

Based on the English-language literature, fewer than 50 cases of epidermal inclusion cysts of the breast have been reported. Few theories being postulated

about epidermoid inclusion cyst being congenital development of the cyst secondary to obstructed hair follicles, injury to the epidermis resulting in epidermal fragments being implanted more deeply within the breast tissue or developed following squamous metaplasia of normal columnar cells within a dilated duct in cases of fibrocystic disease, or within a fibroadenoma or phyllodes tumour. [1,2,4,7]

The differential diagnoses of epidermal cyst in breast include fibro adenoma, breast abscess, breast carcinoma which needs to be differentiated. Radiologically on mammography, it appears as non-calcified, well-circumscribed homogeneous lesion with increased density. Epidermal cyst can cause severe complications; which include spontaneous rupture leading to inflammation and abscess formation and patient present with a discharging sinus in the peri-areolar region. Although these cysts are benign, they may rarely transform into squamous cell carcinoma. [8,9] Symptomatic cases presenting with an enlarged palpable breast lump, even with typical mammography appearances, excision is usually recommended for definitive histopathological diagnosis so as to exclude a malignant lesion with benign imaging features, and for the prevention of potential risk of getting transformed in a malignant one. Menville et al. found that 19% of the patients with EIC in his case series showed malignant squamous cell lining on histopathological examination. [10]

CONCLUSION

Epidermal cyst is a rare benign lesion of breast, which should be excised and histologically correlated to rule out any potential complications that can arise from these cysts. In summary, an epidermal inclusion cyst of the breast is potentially serious, although such cysts are 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 et.al. [11] Clinically they can mimic as malignant tumors due to dimpling of nipple because of the underlying inflammation and irregularity of surface. [12,13] Excision is probably the most appropriate treatment, which eliminates the possible risk of malignant transformation as well as undue anxiety with diagnosis by fine needle aspiration cytology and confirmation on histopathology.

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