Epidermal Cyst of the Breast: A Rare Case Presentation

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ABSTRACT
Epidermal inclusion cyst (EIC) arising from the breast is an interesting, rare, benign, and diagnostically challenging condition, since these may be misdiagnosed as malignant breast neoplasm, both on clinical and radiological examination, thereby creating undue anxiety and apprehension until the definitive diagnosis is formulated. To substantiate it, two cases of epidermal cyst of breast have been described.

Keywords: Benign breast lesions, Breast lump, Epidermal cyst, Epidermal inclusion cyst.

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INTRODUCTION
An epidermoid cyst is a benign cyst usually found on the skin. The cyst has an ectodermal tissue origin. On histopathological examination, the cyst is lined by stratified squamous epithelium underneath of which are found flakes of keratin. Several synonyms exist for epidermoid cysts, including epidermal cyst, epidermal inclusion cyst (EIC), infundibular cyst, and keratin cyst. Epidermal inclusion cyst more specifically refers to implantation of epidermal elements into the dermis.

Epidermal cyst of breast is an uncommon benign condition. It 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 skin of 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 30 cases of EICs of the breast have been reported in the English-language literature.1-6

CASE REPORTS
Case 1
A 40-year-old woman came with complaints of a lump in her left breast, since 2 and half months. She noticed the lump during shower. It was initially a size of the pea and gradually increased into the current size. 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 or a family history of breast disease.

On examination, the lump was located at the upper inner quadrant of the left breast and measured approximately 3.0 × 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.

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

The gross appearance of the specimen was an elliptical cystic lesion measuring 2.8 × 1.2 cm, on cutting open, serous cyst contents oozed out. On histopathological examination, presence of a cyst in the dermis was found, and the cyst was lined by stratified squamous epithelium underneath of which showed flakes of keratin. No malignancy was noted (Figs 2 and 3). The final diagnosis of an epidermal cyst was made.

Case 2
A 48-year-old woman came with the complaint of a mass in her right breast. The mass had been for 2 years. She had history of hysterectomy due to uterine fibroid 2 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 oval, firm, well-circumscribed. After excisional removal of mass, an epidermoid cyst was confirmed on histopathological examination (Fig. 4).

DISCUSSION
A few theories regarding EIC etiology have been postulated, namely congenital development of the cyst...
secondary to obstructed hair follicles or pores, 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 phyllodestumours.1,2,4,7

The differential diagnosis of epidermal cyst in breast includes fibroadenoma, breast abscess, breast carcinoma, and this need to be differentiated. Radiologically on mammography, it appears as noncalcified, well-circumscribed homogeneous lesion with increased density. Epidermal cyst can cause severe complications; potential ones include spontaneous rupture leading to inflammation and abscesses and patient present with a discharging sinus in the periareolar region. Although these cysts are benign, they may rarely transform into squamous cell carcinoma.8,9 Symptomatic cases presenting with an enlarging 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 malignant transformation.

**CONCLUSION**

Epidermal cyst is a rare entity in breast. It presents as breast mass with clinical diagnosis of fibroadenoma or breast carcinoma. It should be excised and histologically correlated, to rule out any potential complications that can arise from these cysts. Menville10 found that 19% of the patients with EIC in his case series showed malignant squamous cell lining on histopathological examination. An EIC 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 the origin of the rare squamous carcinoma of the breast, as suggested...
by Hasleton et al. Clinically, they can mimic benign as well as malignant tumors. Excision is probably the most appropriate treatment, which eliminates the possible risk of malignant transformation as well as undue anxiety.

REFERENCES