CASE REPORT

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A rare presentation of a giant sebaceous cyst in the breast- case report

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CASE REPORT ARTICLE

ABSTRACT

Cystic swellings of the sebaceous gland occurring due to blockage of their ducts, which opens commonly into the hair follicles, are called as sebaceous cysts. They become distended by their own secretary materials i.e. sebum (yellowish cheesy pultaceous material) secondary to blockage. These are commonly seen on the scalp, face and scrotal areas containing dense hair follicles and rarely seen on the breast, palm or sole. Sebaceous cyst occurrence and huge size in the breast is very rare and liable to develop complications like malignant transformation. It poses a clinical dilemma to distinguish it from other benign breast conditions. Here we are reporting an unusual case of 50year female presented with complaints of lump in the left breast for 20 years with no associated complaints.

Keywords: Sebaceous cyst, breast lump, punctum, sebum.

1. INTRODUCTION

Sebaceous cyst is a type of retention cyst. It occurs due to blockage of the passage of the duct in a sebaceous gland, does leading to formation of a cystic swelling (Williams, O'Connell & McCaskie, 2018). Epidermal cyst or pilar cysts are commonly referred by the term sebaceous cyst. These glands are located within the dermis secreting sebum through sebaceous duct which open directly to dermal surface or via the hair follicles. Punctum is present over the centre in majority of cases (70%) because the ducts open directly into the skin which gets blocked. Punctum is a depressed black spot over the summit of the cyst (Williams, O'Connell & McCaskie, 2018). Because of the denuded squamous epithelium (keratin) which is black in appearance. In rest of the cases, the ducts opening to the hair follicle and so punctum is not seen. Loss of hair over the surface is common finding due to constant pressure over the roots i.e. base of the hair follicles. Displeasing odour of sebum content is quite common. Palms and soles or breast are the most uncommon sites for cyst formation as there are no sebaceous glands present there. The cyst contains cheesy material of yellowish white colour with mixture of epithelium and fat. It has putty like consistency, with a parasite in the wall of the sebaceous cyst known as Demodex folliculorum (Demirdağ et al., 2016). It is layered by only a single epidermal layer of squamous epithelium. It is a painless swelling which is ideally smooth, soft, nontender, freely mobile, adherent to skin especially over the summit, fluctuant (positive Paget's test), non trans illuminating. It moulds itself on finger indentation. The cyst is considered unusual and quite possibly cancerous if it has a size that's larger than five centimetres in diameter (Singh, 2012). The rate of reoccurrence after excision is very rapid. There are other signs of infection such as redness associated with pain or pus drainage (Mahmud et al., 2015). Here we are reporting anunusual case of a 50year female presenting with a lump in the left breast since 20 years with no associated complaints which was found out to be a giant sebaceous cyst.

2. CASE REPORT

A 50-year-old female patient came to the hospital with complaints of swelling in the left breast since 20 years which is gradually increasing in size. She first noticed the swelling 20years ago; initially it was small swelling of approximate size 1*2cm. There was no history of any trauma, fever, nipple discharge or any history of benign breast disease or any surgical intervention to the breast. She attained menarche at 15 years age and menstrual history is normal. She had 2 children and both were adequately breast fed. At age of 45 years she attained menopause. The patient doesn't give any history of intake of any hormonal contraceptive pills. Her family and personal history are not of much significance. Swelling was painless withno history of any discomfort. The swelling gradually increased in size over a period of 20 years (figure 1).

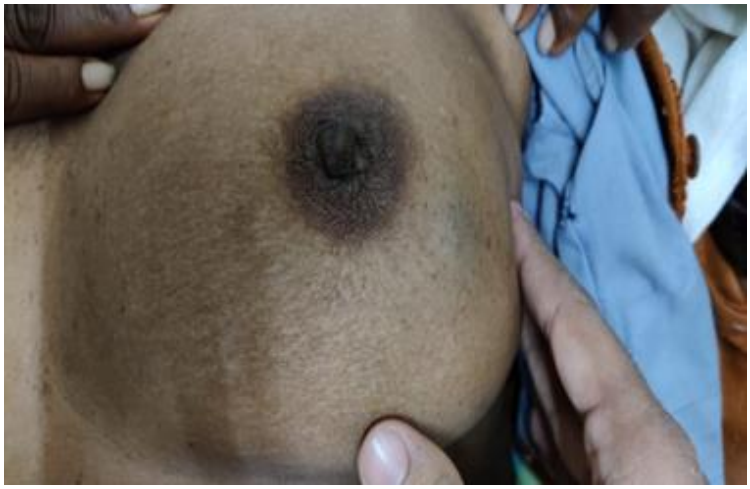

Figure 1 Left breast lump of approx. size 7x5cm involving the upper outer and inner quadrant

On examination: It's a single, oval shaped, well defined swelling of size 7*5cms, involving the upperouter and inner quadrant of left breast, surface is smooth, overlying skin is normal with no scars, sinuses or any engorged veins. It is non tender to palpate, no local rise of temperature, firm in consistency, mobile, overlying skin normal, not fixed to overlying skin or chest wall, skin over swelling is pinchable, a spot of greenish black discolouration of skin seen over swelling. No s/o any discharge, no retraction of nipple seen. Right breast and bilateral axilla are normal.

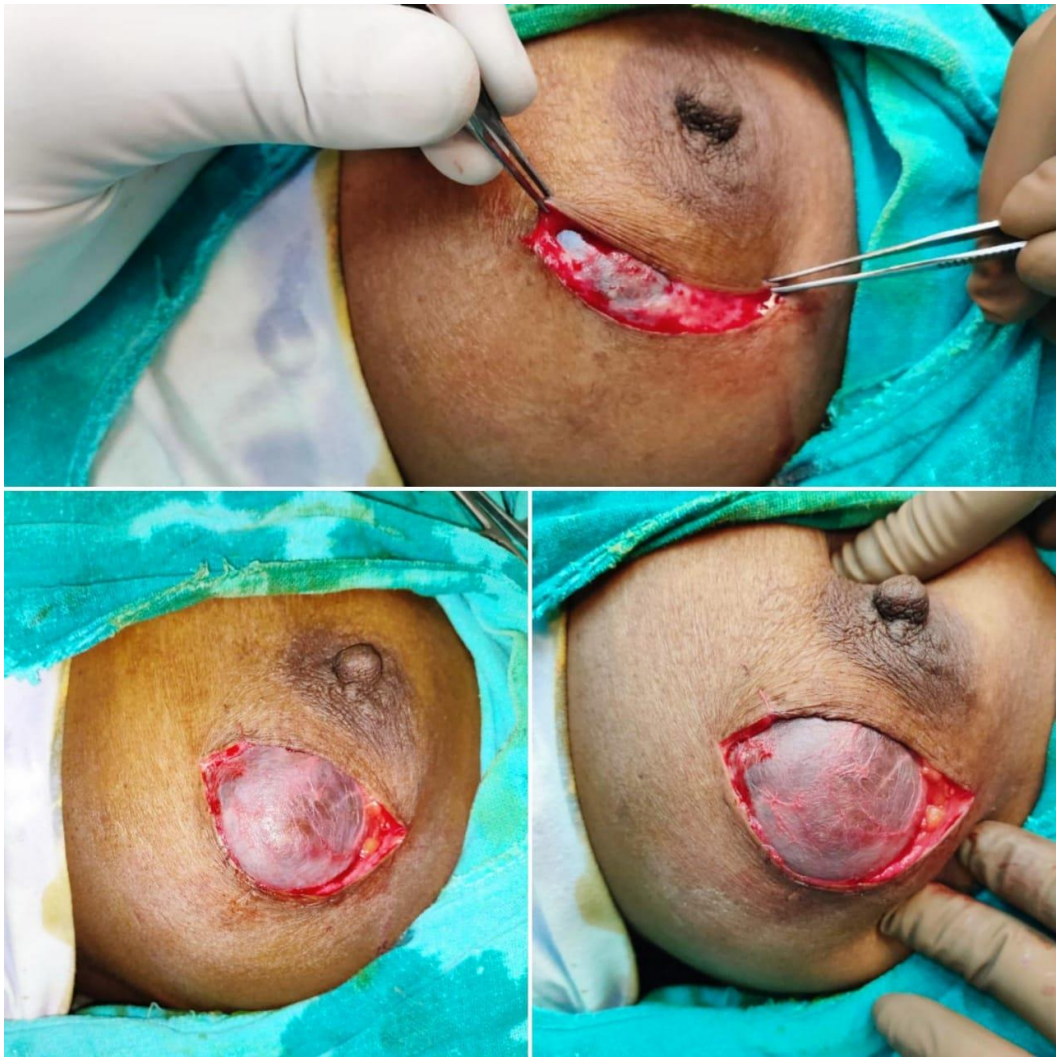

Figure 2 Intraoperative image showing Encapsulated Cystic swelling with putty like content.

She is evaluated further and on ultrasound examination of breast it was reported as: A well defined lesion with s/o benign nature in left breast, old galactocele. Further she underwent afnac of swelling, whichon cytology showed s/o (benign lesion) squamous inclusion cyst with flakes and clumps of flat epithelial cells with changes of aging and pigmentation. A few places show rare nucleated flat squamous cells with pyknotic nucleus. Back ground shows chiefly granular material and rare karyopyknotic debris, sparse lipid vacuoles and few fragmented red blood cells. All the features are distinctive of a sebaceous cyst. She underwent an Excisional biopsy of the swelling in left breast. An elliptical incision was given at the site of maximum bulge, lateral to the nipple areola complex and the lesion was excised in total with intactcapsule (Fig. 2-7). Hemostasis achieved and skin approximated with interrupted sutures by Ethilon 3-0 Rc.

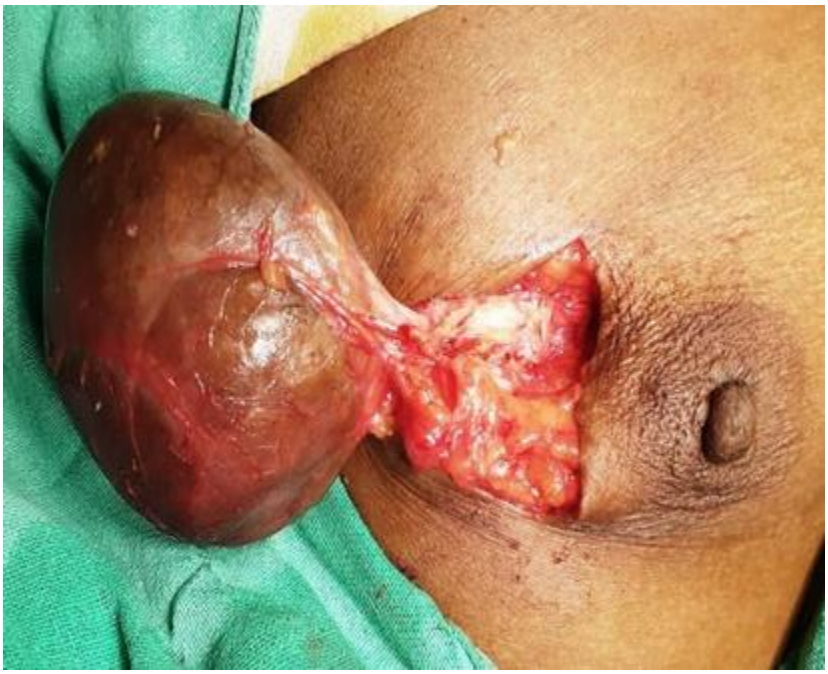

Figure 3 Intra operative images showing complete excision of swelling with intact capsule.

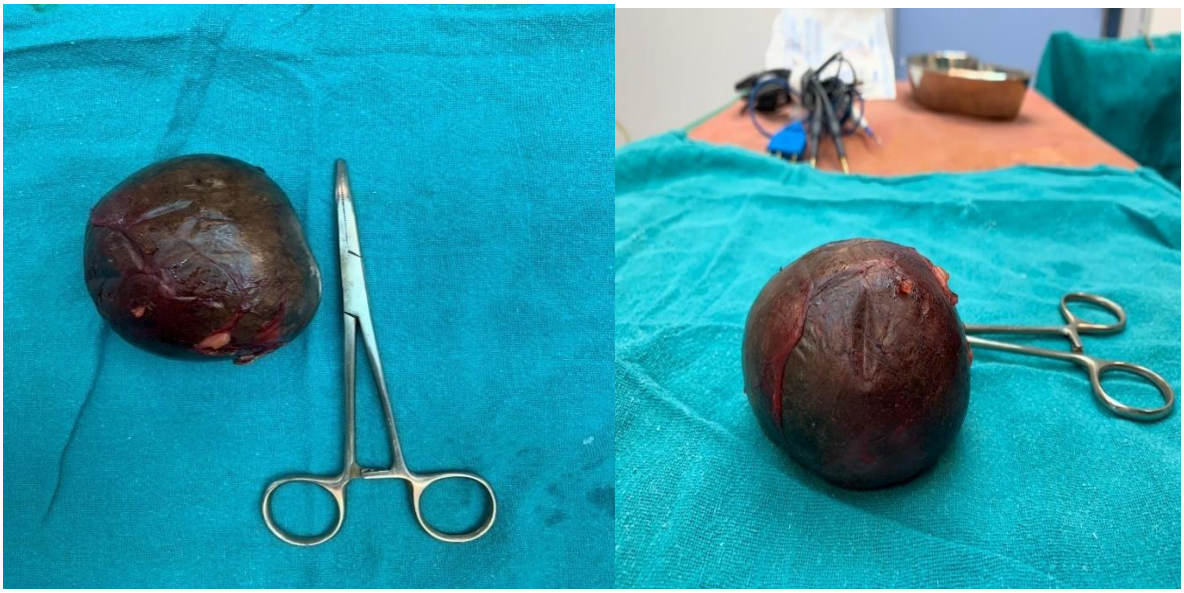

Figure 4 A Single, oval shaped, brownish encapsulated cystic swelling of approx. Size of 7x5 cm, smooth surface, firm in consistency.

Excised cystic swelling sent for further histopathological examination which reported as the swelling is a sebaceous cyst with cut section showing pultaceous material.

HISTOPATHOLOGY REPORT

Seen by Dr. :- Dr. ANIL AGRAWAL

Received single, globular, greyish tissue piece measuring 7.5 x 5.5 x 5 cm.
On cut section pultaceous material oozed out.

Section from the given tissue piece shows histopathological features suggestive of Sebaceous Cyst.

Figure 5 Histopathological report

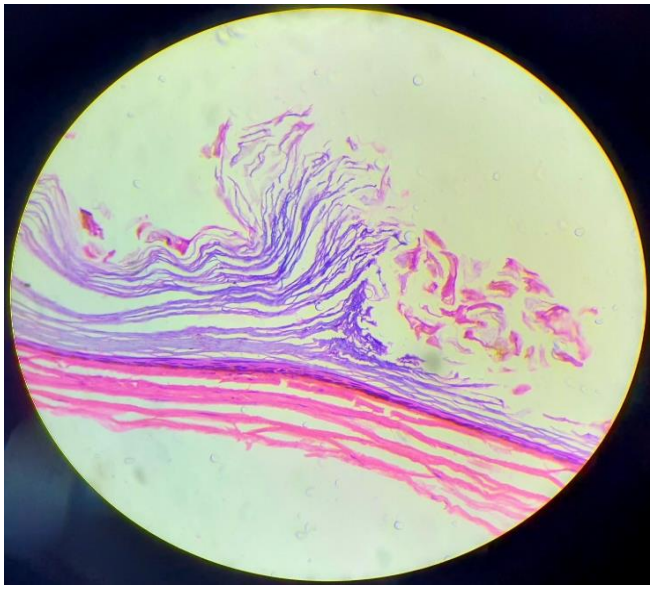

Figure 6 Histopathological image

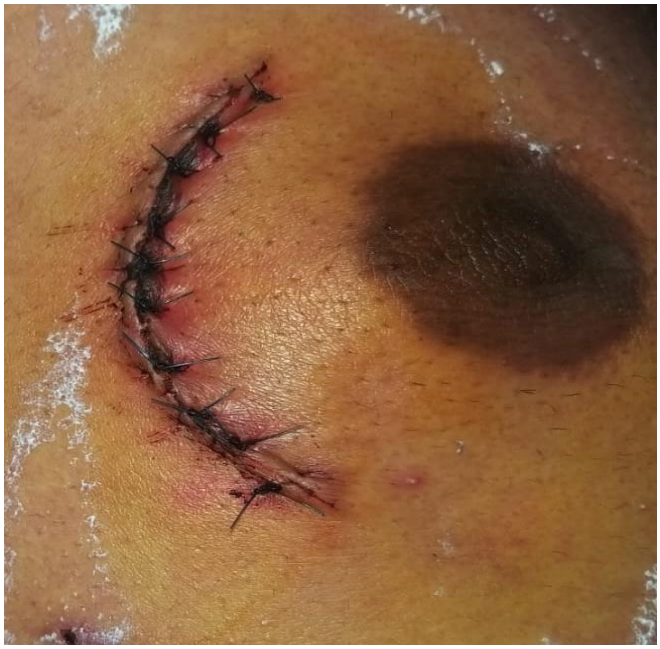

Figure 7 Suture line on follow up on 10thPost operative day

Post-operative period was uneventful; suture line was healthy and healed on followup.

3. DISCUSSION

Sebaceous cyst within the breast is a very uncommon benign condition (Chandanwale et al., 2015). As per latest data very few recorded cases of giant sebaceous cysts in the breast have been published in the literature (Kapila and Verma, 2003). Less than 40 cases of giant sebaceous cysts in the breast have been reported so far (Chandanwale et al., 2015). The exact pathological mechanism behind the formation of cyst arising in the breast is poorly explained or understood. Few theories noted in literature regarding their causes have been postulated: 1. Progressive cystic ectasia of the infundibulum of hair follicles. 2. Damage due to various causes such as trauma etc to epidermis which gets implanted deep inside the breast tissue and it can also occur secondary to reduction mammoplasty and needle biopsy (Mahmud et al., 2015). 3. Squamous metaplasia of normal columnar cells within an ecstatic duct in cases of phyllodes tumour, fibrocystic change, fibroadenoma. 4. Along the lines of embryonic closure are congenital inclusions. In our study, the possible mechanism could beinfundibulum of hair follicles cystic ectasia or unnoticedminor trauma. Clinically, sebaceous cyst presents as a firm, slightly nodular protrusion from the skin. But in case of breast, the cyst often grows to large size, deep within the subcutaneous planes of the breast due to the presence of flexible fat and mammary gland tissue under the skin. On ultrasonography, it appears as solid, circumscribed and complex mass (Chandanwale et al., 2015). Sebaceous cysts in the breast are often confused clinically and radiologically with different benign and malignant lesions of the breast and it's difficult to achieve accurate preoperative diagnosis. On histopathological examination, sebaceous cysts are characterized by a thin layer of squamous epithelium with sebum as its content. Malignant transformation is known to occur in epidermoid cysts and incidence range from 0.011% to 0.045% of cases (das et al., 1995) . While in breast the largest sebaceous cyst reported was 3.1* 2.3 cm (5). In our case, the size of the sebaceous cyst in the breast was 7*5 cm. Treatment of uncomplicated epidermoid cyst is total excision along with the capsule by an elliptical incision, encircling the punctum. Therefore, excision of all sebaceous cysts in the breast is usually recommended for definitive histopathological diagnosis and to exclude a malignant lesion with benign features (Chandanwale et al., 2015). To prevent the potential complications like infection and associated malignant transformation (Mahmud et al., 2015).

4. CONCLUSION

Giant sebaceous cyst in the breast is rare benign clinical condition and it is prone to develop complications on long standing course including malignancy transformation. We have presented here a rare case of giant sebaceous cyst in the breast. It'sone of the few cases in the literature presented till date.

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Author Contributions

Details of contribution of each authors regards manuscript work & production.

Dr Anurag bhattacharjee - Data acquisition, interpretation of data, manuscript writing and editing
Dr Bhavaniprasad Kalgani - Concept and design, Critical review, final approval of version to be published
Dr Harshal Ramteke - Guarantor, Critical review, final approval of version to be published
Dr Anand Agrawal, Dr Ravi Ponnugoti, Dr Deepak gupta, Dr Sagar Rathod & Dr Niveditha suresh - Critical reviewers

Informed Consent

Written and oral informed consent was obtained from the patient in this study.

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Conflict of interest

The authors report no conflict of interest.

Data and materials availability

All data associated with this study are present in the paper.

Peer-review

External peer-review was done through double-blind method.

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