

“PSEUDOHAMARTOMA” IN A LACTATING BREAST**Kaviratna M¹, Gunawardena D S²****¹Department of Radiology, Apeksha Hospital, Sri Lanka****²Department of Radiology, Royal Perth Hospital, Western Australia****Key words: hamartoma; galactocele; phyllodes tumour****Corresponding author: Kaviratna M****Copy right: Kaviratna M¹** <https://orcid.org/0000-0002-9784-9603>

This case report describes a gross asymmetric breast enlargement due to a large galactocele and a rapidly growing benign phyllodes tumour in a lactating mother. Imaging appearance of this combination has not been reported previously. Simultaneous occurrence of these two pathologies has given rise to “pseudo-hamartoma appearance” in the mammogram as we illustrate here.

Introduction

Hamartoma is a well-known benign breast entity with a characteristic imaging appearance. We present a considerably similar imaging finding in the breast due to a separate etiology and propose the term ‘pseudo hamartoma’ to describe it.

Case report

39 years old lactating mother (P2C2), of Indian ethnicity, presented with an asymmetric enlargement of her left breast since the latter part of her 2nd pregnancy. She has failed to feed from that breast on both pregnancies. A large nontender soft mass was felt on examination at her initial presentation. Her initial ultrasound (US) scan revealed a large cyst with echogenic contents, in keeping with a galactocele. This was aspirated to dryness and confirmed a galactocele with no malignant cells.

She represented 24 months later with persistent symptoms, even after cessation of breast feeding. US scan at that time was surprising to find a large circumscribed solid mass of 6cm lying in the middle of the reaccumulated large cyst. (Fig1)

Considering her background dense breast on US, proceeded with a contrast enhanced subtraction mammography (CESM) for further evaluation. It revealed a 10 cm multi-lobulated mass surrounded by a large fat density halo and a thin peripheral capsule giving rise to the ‘pseudo hamartoma’ appearance. (Fig 2)



Vj ku'ku'cp"qr gp/ceegu'ct vleg" f kwtkdwgf "wfp gt"vj g"vgt o u'qh'vj g'Etgc'xg'Ego o qpu" Cwtkdwkp"6Q"KpvtcpvkqpcnNlegpug.'y j lej "r gto ku'wptgwtlevgf "wug."f kwtkdwkp"cpf " tgr tqf wv'kp'lp"cp{ "o gf kwo "r tqxkf gf "vj g"qtki kpcn'cwj qt"cpf "uqwtg'ctg'etgf kqf 0

US guided 14-gauge core biopsy of the mass revealed a fibroadenoma with the possibility a phyllodes tumour (PT). Due to the possibility of satellite tumour raised in CESM, a breast MRI scan was arranged prior to surgical planning. This confirmed the solitary mass wrapping around the cyst as described in fig 3.

Lumpectomy was performed with spilling of some milk at the time. Pathology described a 209.8 g tumour measuring up to 66 mm. Margins were 7mm on medial and lateral sides and the rest were 1mm. Cut surface was pale tan and solid with a whorled appearance and some clefts. Microscopy was a fibroepithelial lesion with a characteristic leaf like architecture, expanding into dilated ducts. Stroma showed mild cellularity, 5 mitoses per 10 high power field and no atypia. Myoepithelial layer was preserved. This was reported as a benign PT and lobular neoplasia in situ (ALH/LCIS) of classical type without necrosis or pleomorphism, was reported in background breast tissue. Hence, annual mammographic follow up is recommended for this lady.

Discussion

Hamartoma or fibroadenolipoma is a benign incidental finding in mammography. It is composed of encapsulated normal fat and fibro glandular tissue⁵.

Interestingly, somewhat similar mammographic appearance in our case is due to coexisting dual pathologies in the same breast and hence called a ‘pseudo hamartoma’, as illustrated in fig 2.

Galactoceles are the commonest lactation related breast masses due to blocked ducts and it may associate with feeding difficulties. Within a long standing galactocele, milk protein is denatured by enzymes to emulsified fat which later coalesce to produce large fat globules. Variable appearances of galactoceles in imaging depend on its fat content and interventions are required only to relieve symptoms^{2,3}.

Galactoceles usually co-exist with benign tumors like lactational adenoma or fibroadenoma while it was a benign Phyllodes in our case. These 3 tumors arise from the intralobular stroma of the breast and their pregnancy related growth is due to hormonal sensitivity². Older age and tumour characteristics of large size, lobulated outline, heterogeneity on US and rapid growth favor a PT over fibroadenoma. However, as in our case, Asian women tend to present with PT at a younger age than western¹. Alipour et al concluded, that there is no association of the large size and rapid growth of gestational PT to its malignant transformation. Interestingly they described, two malignant PT in women who underwent subfertility treatment. Pathological diagnosis of PT is based on a characteristic stromal proliferation with epithelial covering giving a leaf pattern¹. Benign findings of low cellularity, lack of atypia and a few mitoses seen in 70% of PT.¹ Authors recommended annual mammographic screening for this lady, as per institutional protocol, due to incidental LCIS which stipulates a high risk of a subsequent cancer in either breast.

Our objective was to share this unusual CESM and MRI appearances of lactating breast, consequent to dual breast pathology.

References

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Figure 1 – Ultrasound scan of the left breast lump

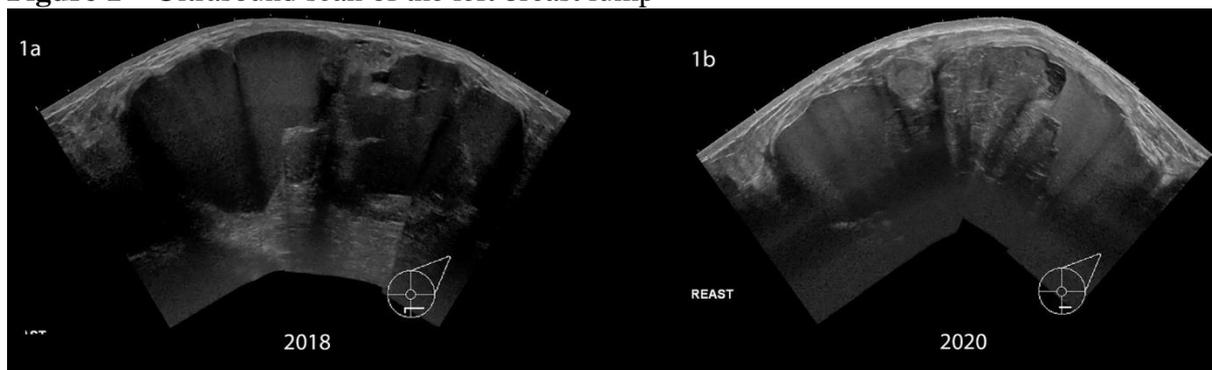
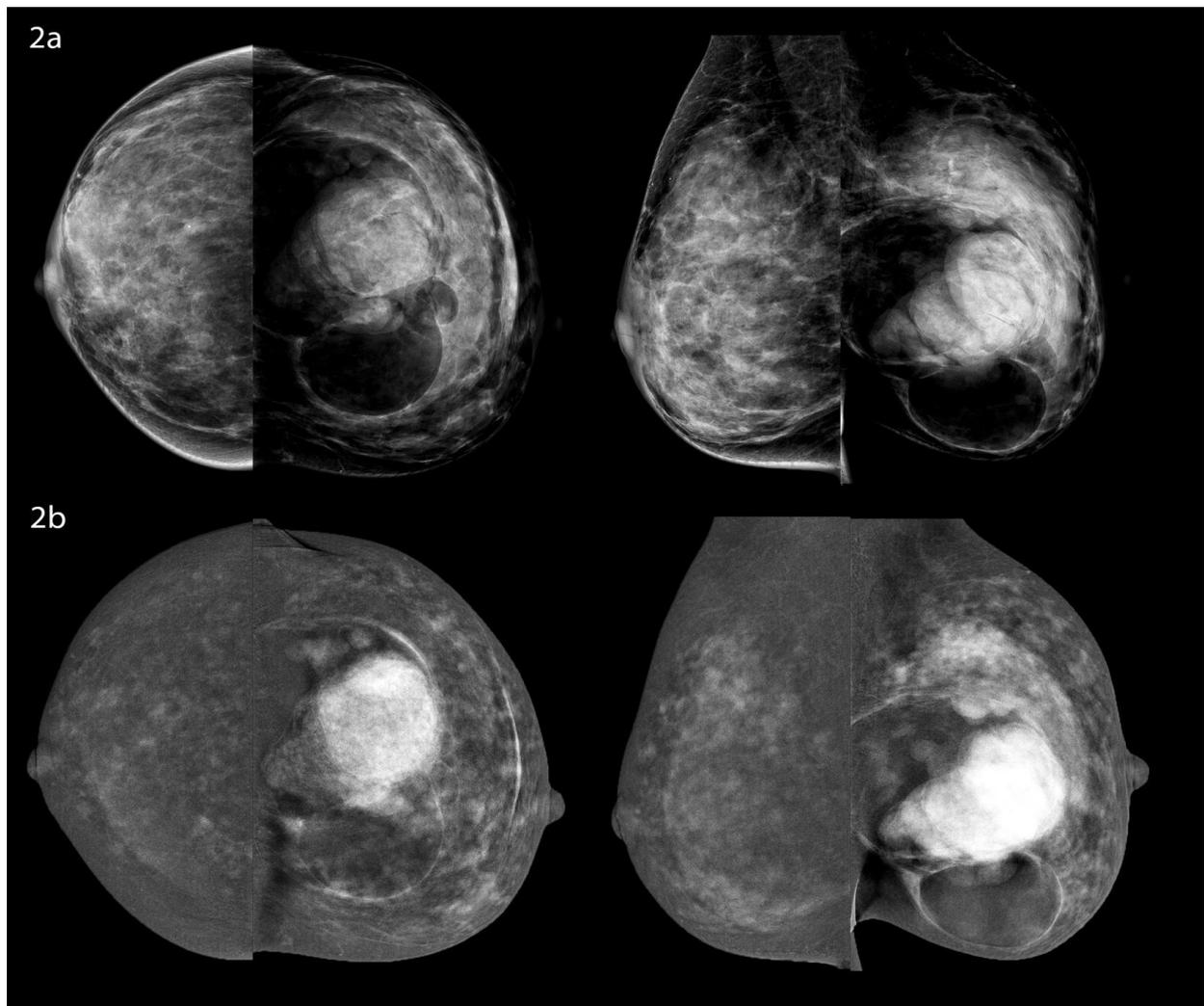


Fig 1a and 1b. Ultrasound scan panoramic view of left lower breast in 2018 and 2020.

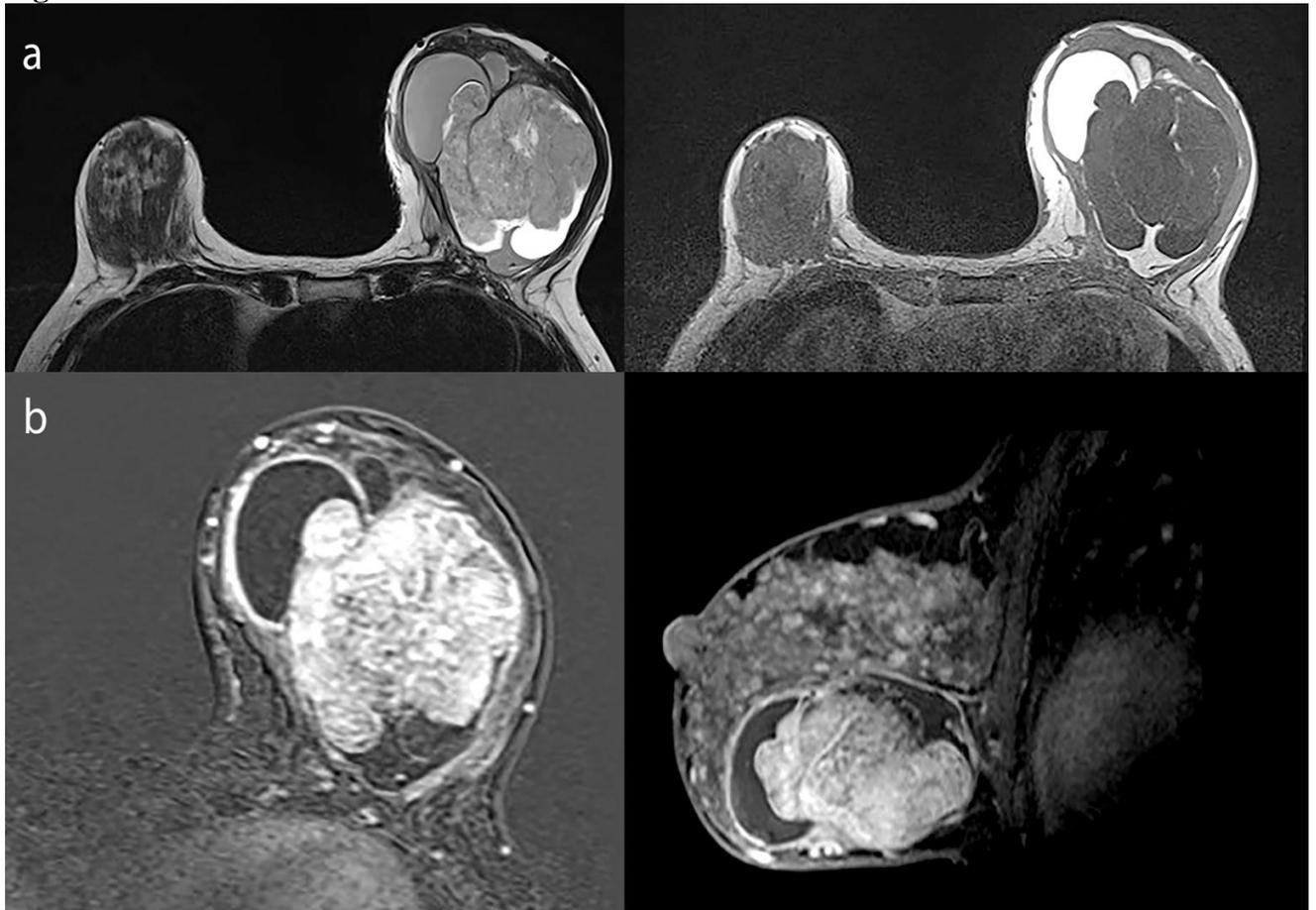
a. A large cyst with multiple loculations containing mobile echogenic fluid but no solid components in 2018.

b. A definitive solid component has developed at 6 o'clock position while cystic areas are seen on its either side in 2020

Figure 2 – CESM of both breasts

2a Low energy images show a multiloculated large mass with a fat density halo and a smooth capsule in the left breast. This spectacular appearance is named as 'Pseudohamartoma' No micro- calcifications seen in either breast.

2b Recombined images show moderate background enhancement on both sides. Lobulated mass in the left breast show avid contrast enhancement with a non-enhancing peripheral cystic component. Suggestion of a few smaller masses noted within the encapsulated cyst. 'Pseudohamartoma' appearance is reinforced in CESM.

Figure 3 - MRI of Breasts

(a) T1 and T2 axial images pre contrast scans, showing gross asymmetry of breasts. The large central mass in the left breast has multiple hypointensity lobulations. Varying intensities seen within the surrounding fluid is due to variable fat content within the galactocele.

(b) Post contrast axial subtracted image (left) and post contrast fat saturated sagittal reconstruction image (right) of left breast. There is homogenous avid contrast enhancement of the solid mass. Smaller galactocele, wrapping around it has a thick but smooth enhancing capsule. MRI confirmed the absence of multiple separate masses within the left side.