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Case Report

Radiology Section

Recurrent Phyllodes Tumour in a Young Woman 15 Years after Initial Excision: A Case Report

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ABSTRACT

Phyllodes tumours are rare fibroepithelial neoplasms of the breast, accounting for <1% of all breast tumours. These tumours exhibit variable biological behaviour, ranging from benign to malignant, with a high potential for recurrence. Early identification and complete surgical excision are crucial in preventing regrowth and malignant transformation. A 28-year-old female presented with a rapidly enlarging right breast lump one week postpartum following a caesarean section for a Dichorionic-Diamniotic (DCDA) twin pregnancy. She stated that she had a similar breast lump in adolescence (at the age of 13), which had been surgically removed. Imaging studies suggested a phyllodes tumour, including Ultrasound (USG), Magnetic Resonance Imaging (MRI), and MR Spectroscopy (MRS). The patient underwent a wide local excision, and histopathology confirmed a recurrent phyllodes tumour. The patient had an uneventful postoperative recovery and was advised on long-term monitoring due to the risk of recurrence. This case underscores the need for recognising phyllode tumours as a differential diagnosis in recurrent breast lumps. Given their potential for regrowth even after long intervals, close follow-up with imaging is essential for early detection and intervention. Surgical excision with adequate margins remains the mainstay of treatment to minimise recurrence risk.

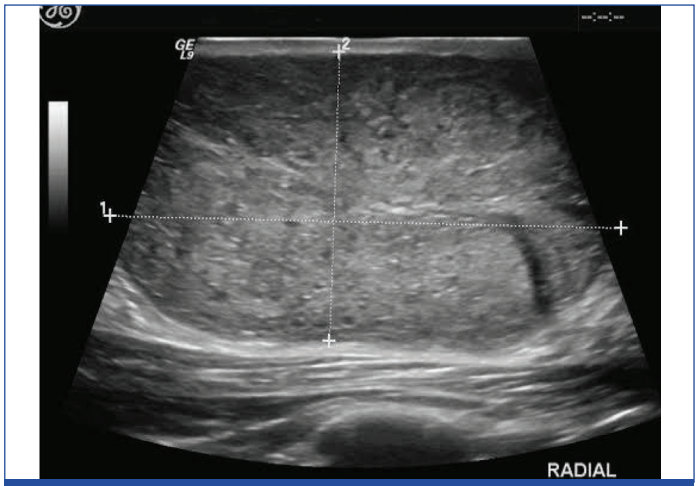
Keywords: Breast lump, Caesarean section, Histopathology, Recurrence, Surgical excision

CASE REPORT

A 28-year-old female presented with a progressively enlarging lump in her right breast, which she noticed one week after undergoing a caesarean section for the delivery of DCDA twin pregnancy. The pregnancy was complicated by foetal distress and pre-eclampsia, necessitating surgical intervention for safe delivery. The patient reported that she initially detected the lump while breastfeeding, and it was associated with mild discomfort but no pain, nipple discharge, or signs of inflammation. Given the recent pregnancy and lactation, the possibility of a lactational adenoma was initially considered. However, the rapid growth of the mass raised concerns about a neoplastic process. The patient had a significant prior history of a similar lump in the same breast 15 years ago, which was surgically excised at that time. No detailed records of histopathological analysis from the previous surgery were available. On physical examination, a well-circumscribed, firm, and large mass measuring approximately 15 cm in diameter was palpable, involving all quadrants of the right breast as shown in [Table/Fig-1]. Due to the massive size of the tumour, which involved nearly the entire breast parenchyma, the lesion manifested as diffuse unilateral breast enlargement rather than a discrete, well-demarcated lump on clinical examination. There were no skin changes, retraction, or ulceration noted. The mass was non tender, and no palpable nipple abnormalities were observed. Examination of the left breast was unremarkable. However, mild enlargement of the right axillary lymph nodes was detected, prompting further imaging studies to assess potential regional involvement.

Breast USG revealed a well-defined, lobulated, heterogeneously hypoechoic solid lesion that was wider than tall as shown in [Table/Fig-2]. Internal cystic areas were observed, suggesting areas of necrosis or degeneration within the tumour. The lesion was seen diffusely occupying the right breast and exerting a mass effect by displacing normal breast parenchyma peripherally. Doppler imaging demonstrated peripheral vascularity, further supporting the possibility of a solid neoplasm. Additionally, the ducts in the retroareolar region appeared dilated, indicative of duct ectasia. Multiple enlarged right axillary lymph nodes were present, displaying increased hilar vascularity.

[Table/Fig-1]: Clinical photograph demonstrating diffuse enlargement of the right breast precluding clear demarcation between the lump and normal breast tissue.



[Table/Fig-2]: Grey scale B mode image showing well-defined, lobulated, heterogeneously hypoechoic solid lesion.

Subsequently, contrast-enhanced MRI of the breast was performed to obtain further characterisation of the lesion. MRI revealed a large, lobulated, heterogeneously enhancing mass measuring 15.5×17×11.8 cm, with non enhancing areas and regions of haemorrhage [Table/Fig-3a,b]. The lesion appeared heterogeneously hypointense on T1-weighted images and hyperintense on T2-weighted images, with diffusion restriction on Diffusion-Weighted Imaging (DWI) and corresponding low signals on the Apparent Diffusion Coefficient (ADC) map [Table/Fig-3c-f]. Notably, the mass extended anteriorly up to the subcutaneous region, while posteriorly, it compressed the underlying pectoralis muscle, causing loss of fat planes without evidence of muscle infiltration. Multiple tortuous branches of the internal mammary and lateral thoracic arteries vascularised the lesion. A few enlarged right axillary lymph nodes were also observed, with the largest measuring 2.5 × 1 cm.

MRS was also performed, which demonstrated a choline peak, indicating increased cellular turnover. Additionally, the largest lesion exhibited a Type III kinetic curve, a pattern often seen in aggressive tumours. These findings further supported the suspicion of a phyllodes tumour and helped differentiate it from other benign fibroepithelial lesions such as fibroadenomas, which typically lack such aggressive imaging characteristics as shown in [Table/Fig-3g,h].

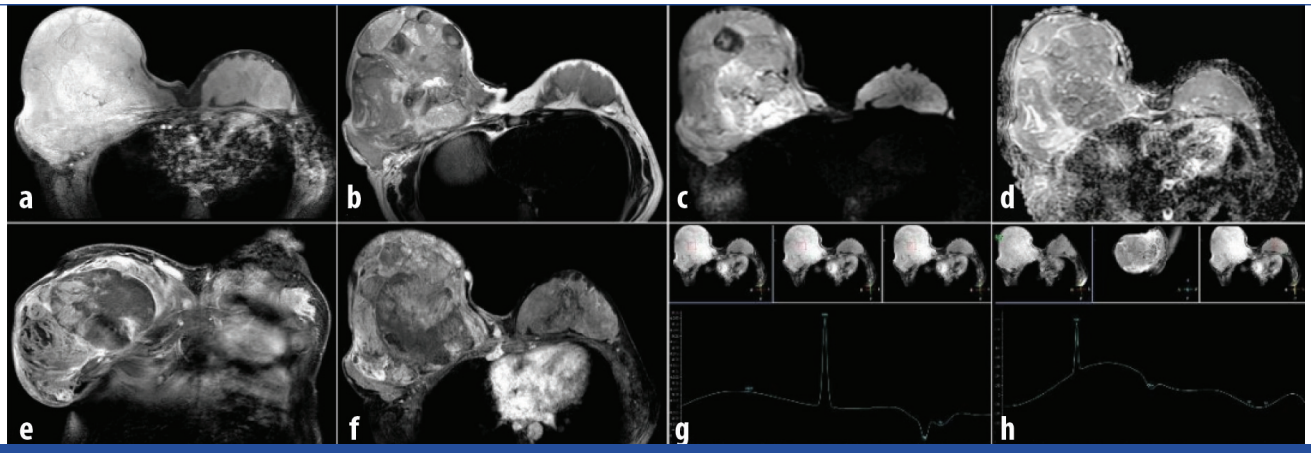
Given the tumour's large size and risk for malignancy, the patient underwent a wide local excision of the mass with the goal of achieving clear surgical margins. Histopathological examination of the excised tumour revealed a biphasic architecture, comprising both epithelial and stromal components. These histopathological features confirmed the diagnosis of a recurrent phyllodes tumour of the right breast as shown in [Table/Fig-4]. The patient had an uneventful postoperative recovery and was discharged on postoperative day five with recommendations for close follow-up.

DISCUSSION

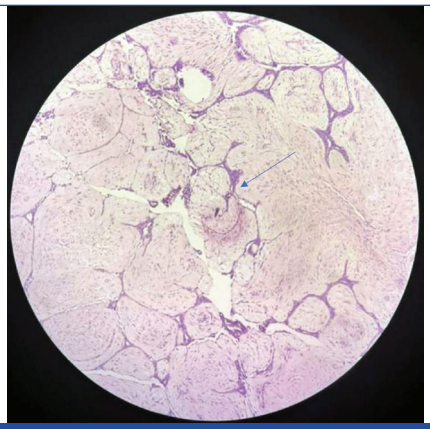
Phyllodes tumours are rare fibroepithelial neoplasms of the breast, accounting for <1% of all breast tumours [1]. These tumours are characterised by a biphasic pattern with both epithelial and stromal components, and they exhibit a variable biological spectrum, ranging from benign to borderline and malignant forms. While benign phyllodes tumours may behave similarly to fibroadenomas, borderline and malignant variants have a higher risk of recurrence [2]. The aetiology of phyllodes tumours remains unclear, but hormonal influences, genetic mutations, and prior breast lesions have been implicated in their pathogenesis [3].

Clinically, phyllodes tumours present as rapidly enlarging, well-circumscribed breast masses. They typically occur in middle-aged women but can also be seen in younger individuals. Unlike fibroadenomas, phyllodes tumours grow quickly and may recur even after surgical excision [4]. The recurrence rate varies depending on tumour grade, with reported rates of 8% to 36% for benign, 14% to 36% for borderline, and 23% to 46% for malignant tumours [5]. Wide local excision with negative surgical margins remains the treatment of choice, as inadequate excision is the most significant risk factor for recurrence in phyllodes tumours [6]. Recurrent phyllodes tumours, particularly those occurring many years after the initial excision, are rare [7]. Studies suggest that inadequate surgical margins are the most significant predictor of recurrence, with rates varying between 10% and 40% depending on completeness of excision [8,9].

Recurrent phyllodes tumours, on USG are typically well-defined, hypoechoic lesions with lobulated margins, moderate to marked vascularity, and occasional internal cystic spaces or posterior acoustic enhancement, reflecting stromal overgrowth and degeneration, according to findings from a large sonographic study of recurrent phyllodes lesions, in which 88.9% had well-defined margins, and



[Table/Fig-3]: a,b) Axial T1WI and T2WI MR images of bilateral breasts showing a heterogeneous signal intensity mass occupying the entire right breast with hypointense signal clefts; c,d) Axial DWI and ADC MR images showing a heterogeneous mass in the right breast with areas of diffusion restriction on DWI and corresponding low signal on ADC; e,f) Post-contrast coronal MR and dynamic contrast images revealing a heterogeneously enhancing right breast mass with non enhancing and haemorrhagic areas; g,h) MR Spectroscopy (MRS) demonstrating a choline peak, with the largest lesion exhibiting a Type III kinetic curve.



[Table/Fig-4]: Excised right breast tumour showing a biphasic pattern with epithelial and stromal components (blue arrow), marked stromal overgrowth, mild pleomorphism, and myxoid changes (H&E, 40x).

83.4% showed increased blood flow on Doppler imaging [10]. In a case of recurrent gigantic borderline phyllodes tumour, MRI revealed a 12.8 cm lobulated heterogeneously enhancing mass with accompanying enlarged lymph nodes, demonstrating the value of MRI for preoperative planning [11].

Local recurrence is significantly linked to positive surgical margins and large tumour size, and recurrent tumours can maintain or progress in histological grade over time. One report described a patient who had six recurrences following initial excision, highlighting the unpredictable clinical outcome [12]. In a series of recurring lesions, histologic features of recurrence replicated the original pathology in two-thirds of cases, whereas one-third exhibited change in grade at recurrence, emphasising the possibility of biological evolution [7]. Adjuvant radiotherapy is considered for high-risk cases, particularly if surgical margins are close or if there is a history of multiple recurrences [13].

CONCLUSION(S)

This case highlights the importance of recognising phyllodes tumours as a potential cause of recurrent breast lumps, particularly in young females. The long interval between this patient's initial excision and recurrence underscores the unpredictable nature of these tumours and the necessity for long-term surveillance. Given the rapid growth pattern and potential for recurrence, early identification through imaging and histopathological confirmation is essential for accurate diagnosis.

REFERENCES

[1] Limaiem F, Kashyap S. Phyllodes Tumour of the Breast. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 [cited 2025 Aug 4]. Available from: http://www.ncbi.nlm.nih.gov/books/NBK541138/.

[2] Lissidini G, Mulè A, Santoro A, Papa G, Nicosia L, Cassano E, et al. Malignant phyllodes tumour of the breast: A systematic review. Pathologica. 2022;114(2):111-20.

[3] Jara-Lazaro AR, Tan PH. Molecular pathogenesis of progression and recurrence in breast phyllodes tumours. Am J Transl Res. 2009;1(1):23-34.

[4] Jacklin RK, Ridgway PF, Ziprin P, Healy V, Hadjiminas D, Darzi A. Optimising preoperative diagnosis in phyllodes tumour of the breast. J Clin Pathol. 2006;59(5):454-59.

[5] Boutas I, Kontogeorgi A, Dimas D, Koufopoulos N, Genitsaridi SM, Sitara K, et al. Local recurrence for phyllodes tumours of the breast: Systematic review and meta-analysis. Oncol Lett. 2022;24(4):353.

[6] Houssami N, Macaskill P, Luke Marinovich M, Morrow M. The association of surgical margins and local recurrence in women with early-stage invasive breast cancer treated with breast-conserving therapy: A meta-analysis. Ann Surg Oncol. 2014;21(3):717-30.

[7] Saxena P, Lalchandani A, Dausage C. Recurrent phyllodes tumour of breast infiltrating the latissimus dorsi reconstruction flap. BMJ Case Rep. 2020;13(12):e238306.

[8] Al-Shami K, Awadi S, Khamees A, Alsheikh AM, Al-Sharif S, Ala' Bereshy R, et al. Estrogens and the risk of breast cancer: A narrative review of literature. Heliyon. 2023;9(9):e20224.

[9] Sars C, Sackey H, Frisell J, Dickman PW, Karlsson F, Kindts I, et al. Current clinical practice in the management of phyllodes tumours of the breast: An international cross-sectional study among surgeons and oncologists. Breast Cancer Res Treat. 2023;199(2):293-304.

[10] Xiao M, Zhu Q, Jiang Y, Li J, Wang H, Zhang J, et al. Local recurrent phyllodes tumours of the breast: Clinical and sonographic features. J Ultrasound Med. 2015;34(9):1631-38.

[11] Zhang X, Gan L, Zhao J, Zhang H. Recurrent giant phyllodes tumour of the breast: A case report. AME Case Rep. 2024;8:39.

[12] Iimori N, Kashiwagi S, Ishikawa T, Kawajiri H, Takashima T, Ohsawa M, et al. Mammary phyllodes tumour with six episodes of a relapse: A case report. J Med Case Rep. 2017;11(1):261. Doi: 10.1186/s13256-017-1432-y. PMID: 28911335; PMCID: PMC5599879.

[13] Ji Y, Zhong Y, Zheng Y, Hu H, Min N, Wei Y, et al. Surgical management and prognosis of phyllodes tumours of the breast. Gland Surg. 2022;11(6):981-91.

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