



THE QUIET GIANT:- RECURRENT BENIGN PHYLLODES TUMOR - A CASE REPORT

Medical Science

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ABSTRACT

Background: Phyllodes tumours are rare fibroepithelial breast neoplasms often misdiagnosed as fibroadenomas, leading to inadequate excision and recurrence. **Case Presentation:** A 46-year-old woman presented with a rapidly enlarging right breast mass and a history of two prior excisions, initially reported as fibroadenoma and later as benign phyllodes tumour. Examination revealed a large, lobulated, mobile mass without skin or chest wall fixation and no axillary lymphadenopathy. Imaging showed a well-circumscribed heterogeneous lesion with cystic clefts suggestive of phyllodes tumour. The patient underwent definitive excision with adequate margins. Histopathology confirmed benign phyllodes tumour. **Conclusion:** This case highlights the diagnostic overlap between fibroadenoma and phyllodes tumour and emphasizes that adequate surgical margins are critical in preventing recurrence. Early recognition and definitive oncologic excision remain the cornerstone of management.

KEYWORDS

INTRODUCTION:-

Phyllodes tumours are rare fibroepithelial neoplasms of the breast, accounting for less than 1% of all breast tumours, characterized by biphasic proliferation of epithelial and stromal components arranged in a distinctive leaf-like architecture [1,2]. They typically present in women in the fourth to fifth decades of life, with Indian studies reporting a slightly younger mean age of 39 years at presentation [3]. Based on histopathological parameters including stromal cellularity, atypia, mitotic activity, stromal overgrowth, and tumour margins, they are classified into benign, borderline, and malignant subtypes, with benign lesions constituting the majority [2,4].

Clinically, benign phyllodes tumours present as rapidly enlarging, painless breast masses and frequently mimic fibroadenomas, leading to diagnostic challenges and occasional misclassification, particularly on limited sampling such as core needle biopsy [5]. This diagnostic overlap is clinically significant, as inadequate initial excision is a key factor predisposing to recurrence.

Although benign phyllodes tumours lack metastatic potential, they demonstrate a recognized propensity for local recurrence, reported in approximately 7–10% of cases, most commonly within the first two years following surgery [6,7]. Contemporary surgical literature emphasizes that adequate margin clearance remains the single most important determinant of local control. The Royal College of Surgeons (RCS) guidelines and analyses highlight that phyllodes tumours require complete excision with clear histological margins, with margin adequacy directly influencing recurrence risk and guiding re-excision strategies [7].

Recent international recommendations further support a tailored surgical approach, ranging from wide local excision to simple mastectomy depending on tumour size, recurrence, and breast-to-tumour ratio, while axillary surgery is generally not indicated due to the rarity of nodal spread [8].

The present case highlights the diagnostic and therapeutic challenges associated with recurrent benign phyllodes tumour following initial misdiagnosis as fibroadenoma, emphasizing the critical importance of accurate histopathological evaluation, adequate surgical margins, and appropriate definitive management.

Case Presentation:-

A 50 year-old married Indian female presented with a lump in the right breast of 2–3 years duration. The lump was insidious in onset that progressively increased in size, reporting a recent rapid enlargement from approximately lemon-sized to the present larger size. The lump was painless and not associated with nipple discharge, trauma, fever. She underwent two previous surgeries in the same breast over the past 2 years for similar complaints. Histopathology of initially revealed fibroadenoma on the primary excised segment, followed by a diagnosis of benign phyllodes tumour on subsequent excision. There are no systemic symptoms such as weight loss, anorexia, or back pain.

She has no known comorbidities, history of blood transfusion and ICU stay

On Physical examination

On Inspection- Bilateral breasts are asymmetrical in shape, size and level. Right breast is significantly larger than the left breast. Visible swelling present in the right breast involving all four quadrants of the breast and giving a bosselated appearance. Skin over the breast was stretched, shiny, with enlarged and visible superficial veins. No ulceration, dimpling and colour changes seen over the overlying skin. Right NAC is larger than the left however, no nipple retraction and active discharge was noted

On Palpation- A lump is located in the right breast and is unilateral. It was large in size, measuring approximately 10x8 cm, with a lobulated contour. The surface was smooth but bosselated, and the margins were well defined. It was of mixed consistency, predominantly firm to hard, with areas of cystic consistency suggestive of degeneration or necrosis. The lump was non-tender and freely mobile over the underlying structures, with no restriction of movement. The overlying skin was pinchable though stretched, and there was no evidence of ulceration. There was no fixity to the skin or underlying chest wall, and no nipple discharge was noted. On further examination, the skin pinch test was negative and the pectoralis major contraction test did not indicate towards fixity. Examination of regional lymph nodes was unremarkable.

- Biochemical Profile:- Unremarkable
- Radiological Profile:- Sono-Mammography suggestive of
- Right breast appears grossly enlarged.

A large, low density, lobulated, well circumscribed mass seen occupying almost entire right breast parenchyma.

The mass is abutting the pectoralis muscle, however the overlying skin and nipple areolar complex are intact.

No suspicious calcifications seen, No significant axillary lymph node density seen in right axilla.

On USG Correlation:- A large heterogeneous lobulated mass with circumscribed margins and multiple cystic clefts/ septations seen in right breast measuring approximately 24.4 x 17.3 x 8.4 cm. The mass shows internal and peripheral vascularity on color doppler - likely phyllodes.

Intra-Operatively:-

Procedure Name: NAC sparing Simple Mastectomy

Curvilinear Incision of 10-12 cm given on the Right Breast 2 cm above the Nipple-Areola Complex

Tumour was separated from the surrounding structures, excised out

with adequate margins of < 1cm and sent for Histopathological Examination. Romovac Suction drain was placed in the right breast cavity after achieving adequate hemostasis followed by closure. 300 ml of blood loss was noted.



Gross Specimen:-

shows an excised tumour of 15x10cm, was irregular and oval in shape, variable in consistency including hard, firm and cystic nodules.



Histopathology:-

Presence of hypercellular stroma with leaf-like projections. No signs of malignancy/atypia seen. Suggestive of benign phyllodes tumour.

DISCUSSION:-

Phyllodes tumours are uncommon fibroepithelial breast neoplasms characterized by a wide spectrum of biological behaviour [1,2]. The World Health Organization (WHO) classifies these tumours into benign, borderline, and malignant subtypes based on histopathological parameters including stromal cellularity, nuclear atypia, mitotic activity, stromal overgrowth, and tumour margins [2]. This classification reflects the biological heterogeneity of these lesions and their variable clinical course.

A major diagnostic challenge lies in distinguishing phyllodes tumours from fibroadenomas, as both share overlapping clinical, radiological, and histopathological features, particularly on limited sampling [5]. In the present case, the initial diagnosis of fibroadenoma likely represents sampling error, a well-recognized limitation in fibroepithelial lesions, where characteristic stromal overgrowth and leaf-like architecture may not be adequately represented [5]. This may result in inadequate initial excision and predispose to recurrence.

Grossly, phyllodes tumours typically present as well-circumscribed, lobulated masses with a bulging grey-white cut surface and slit-like clefts imparting a characteristic "leaf-like" appearance. Areas of cystic degeneration may be present, especially in larger or recurrent lesions. In this case, the mastectomy specimen demonstrated classical gross features consistent with a fibroepithelial lesion.

Histopathological evaluation revealed features consistent with benign

phyllodes tumour, including mild stromal cellularity, minimal atypia, low mitotic activity, absence of stromal overgrowth, and well-circumscribed margins as per WHO criteria [2]. Importantly, there was no evidence of malignant transformation or metastatic disease, consistent with the known biological behaviour of benign phyllodes tumours.

Despite their benign classification, phyllodes tumours demonstrate a recognized propensity for local recurrence. Recurrence rates for benign lesions range from approximately 7% to 10%, particularly in cases with inadequate surgical margins [3,6]. The present case, with recurrence following two prior excisions, highlights the importance of margin status and adequate primary management.

Current surgical principles emphasize complete excision with negative margins (≥ 1 cm) as the most important determinant of local control [7,8]. While breast-conserving surgery is appropriate for smaller lesions, simple mastectomy is indicated in cases of large tumours, recurrent disease, or when adequate margins cannot be achieved without compromising cosmesis [4,8]. In this case, given the tumour size, involvement of all quadrants, and prior recurrence, a simple mastectomy with adequate margin clearance was appropriately performed.

Axillary lymph node metastasis is exceedingly rare in phyllodes tumours due to their predominantly hematogenous spread, even in malignant variants [8]. Accordingly, no axillary dissection was performed in this patient, and no lymphadenopathy was identified. Adjuvant therapy remains controversial. While radiotherapy may be considered in borderline and malignant tumours with high-risk features, its role in benign phyllodes tumours is limited [6,8]. Close postoperative surveillance is essential, particularly within the first two years, to detect early recurrence.

WHO CLASSIFICATION OF PHYLLODES TUMOUR OF THE BREAST:-

	Benign	Borderline	Malignant
Stromal atypia	Mild	Moderate	Marked
Stromal cellularity	Mildly increased, can be focal	Moderately increased, can be focal	Markedly and diffusely increased
Stromal overgrowth	Absent	Absent or very focal	Present
Mitotic count	< 5/10 HPF or < 2.5/mm ²	5 - 9/10 HPF or 2.5 - < 5/mm ²	$\geq 10/10$ HPF or ≥ 5 /mm ²
Tumor border	Well defined	Well defined or focally permeative	Diffusely permeative
Malignant heterologous elements	Not Present	Not Present	Presence directly upgrades to malignant category

REFERENCES:-

- Rosen PP. *Rosen's Breast Pathology*. 4th ed. Philadelphia: Wolters Kluwer; 2014.
- Tan PH, Ellis I, Allison K, Brogi E, Fox SB, Lakhani S, et al. The 2019 WHO classification of tumours of the breast. *Histopathology*. 2020;77(2):181–185.
- Sain B, Gupta A, Ghose A, et al. Recurrence patterns in phyllodes tumours: a 25-year experience. *J Pers Med*. 2023;13(5):866.
- Bishr MK, Humphreys A, Ahmed M, et al. Contemporary management of phyllodes tumours. *Br J Surg*. 2025.
- Jacobs TW, Chen YY, Guinee DG Jr, Holden JA, Cha I, Bauermeister DE. Fibroepithelial lesions with cellular stroma on core needle biopsy: problems in classification. *Am J Surg Pathol*. 2005;29(8):1032–1039.
- Sharma A, Hyde K, Ferguson D. Benign and borderline phyllodes tumours: management and follow-up. 2022 study.
- Thind A, et al. Surgical margins for borderline and malignant phyllodes tumours. *Ann R Coll Surg Engl*. 2020;102(6):1–6.
- Yu CY, Huang TW, Tam KW. Management of phyllodes tumour: a systematic review. *Int J Surg*. 2022;99:106–112.
- Tan BY, Acs G, Apple SK, et al. Phyllodes tumours of the breast: a consensus review. *Histopathology*. 2016;68(1):5–21.
- Salvadori B, Cusumano F, Del Bo R, et al. Surgical treatment of phyllodes tumours of the breast. *Cancer*. 1989;63(12):2532–2536.
- Reinfuss M, Mitus J, Duda K, et al. The treatment and prognosis of patients with phyllodes tumour of the breast. *Cancer*. 1996;77(5):910–916.
- Chaney AW, Pollack A, McNeese MD, et al. Primary treatment of cystosarcoma phyllodes. *Cancer*. 2000;89(7):1502–1511.
- Macdonald OK, Lee CM, Tward JD, et al. Malignant phyllodes tumour of the breast: outcomes analysis. *Cancer*. 2006;107(9):2127–2133.
- Co M, Tse GM, Chen C, et al. Current clinical practice in the management of phyllodes tumours. *Breast Cancer Res Treat*. 2023;197:13–22.
- Lu Y, Chen Y, Zhu L, et al. Local recurrence of phyllodes tumours: systematic review and meta-analysis. *Ann Surg Oncol*. 2019;26(5):1263–1275.