RESEARCH PAPER

Giant Benign Phyllodes Tumor of the Breast Mimicking Locally Advanced Carcinoma: A Case Report

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Abstract

Background: Phyllodes tumor is a rare fibroepithelial neoplasm of the breast, accounting for less than 1% of all breast tumors. Giant phyllodes tumors (>10 cm) are uncommon and may clinically mimic carcinoma because of their rapid growth and associated skin changes. Accurate histopathological diagnosis and complete surgical excision with negative margins are essential for optimal management.

Case Presentation:A 50-year-old postmenopausal woman presented with a progressively enlarging lump in the left breast for three months, associated with dull aching pain. Clinical examination revealed a 10 × 10 cm lobulated, firm mass occupying all quadrants of the left breast with central skin thickening and peau d'orange appearance, without chest wall fixation or significant axillary lymphadenopathy. Ultrasonography showed a large heterogeneous hypoechoic solid lesion with internal vascularity. Core needle biopsy suggested a fibroepithelial lesion consistent with phyllodes tumor. The patient underwent simple mastectomy. Histopathological examination confirmed a benign phyllodes tumor characterized by increased stromal cellularity, mild atypia, fewer than 5 mitoses per 10 high-power fields, and negative surgical margins. Axillary lymph nodes revealed reactive hyperplasia.

Conclusion: Giant phyllodes tumors can present with clinical features suggestive of malignancy, posing diagnostic challenges. Histopathology remains the gold standard for definitive diagnosis and grading. Simple mastectomy with adequate margins offers excellent outcomes in large tumors where breast-conserving surgery is not feasible.

Keywords: Phyllodes tumor; Giant breast tumor; Fibroepithelial lesion; Simple mastectomy; Benign breast neoplasm

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INTRODUCTION

Phyllodes tumor is a rare fibroepithelial tumor of the breast composed of both epithelial and stromal components. It is characterized by increased stromal cellularity and a typical leaf-like architectural pattern on histopathological examination. These tumors account for less than one percent of all breast neoplasms and are most commonly seen in women between 40 and 55 years of age, although they can occur in younger or older individuals (1).

The clinical behavior of phyllodes tumors varies widely and depends largely on their histological features. They are classified into benign, borderline, and malignant types based on stromal cellularity, nuclear atypia, mitotic activity, stromal overgrowth, and the nature of tumor margins. This classification is important because it helps in predicting the risk of recurrence and guiding appropriate surgical management (2).

Giant phyllodes tumors are defined as lesions measuring more than 10 centimeters in diameter and are uncommon. These tumors often grow rapidly and may cause marked breast enlargement with stretching of the overlying skin. Patients may present with skin discoloration, dilated superficial veins, peau d'orange appearance, or ulceration. Such features can closely resemble locally advanced carcinoma of the breast, creating a diagnostic dilemma. However, unlike breast carcinoma, lymph node involvement is rare in phyllodes

tumors. When metastasis occurs, particularly in malignant cases, it usually spreads through the bloodstream rather than the lymphatic system (3).

Here, we present a case of a giant benign phyllodes tumor in a postmenopausal woman who presented with clinical findings suggestive of malignancy and was successfully treated with simple mastectomy (4).

CASE PRESENTATION

Patient Information

A 50 year old postmenopausal woman presented to the surgical outpatient department with a complaint of a lump in the left breast for three months. The swelling had an insidious onset and was initially noticed in the upper outer quadrant of the left breast. Over time, it progressively increased in size and eventually involved the entire breast. The patient also reported a dull, aching, continuous pain associated with the swelling.

There was no history of nipple discharge, fever, trauma, loss of weight, or loss of appetite. She had attained menopause two years earlier. There were no known medical illnesses and no prior surgical history.

Clinical Findings

General Examination

On examination, the patient was conscious, oriented, and hemodynamically stable. Her pulse rate was 82 beats per minute and blood pressure was 110 over 70 mmHg. Oxygen saturation was 98 percent on room air, and she was afebrile. Systemic examination did not reveal any abnormal findings.

Local Breast Examination

Inspection revealed a large globular swelling measuring approximately 10 × 10 cm, involving all quadrants of the left breast. There was obvious asymmetry compared to the right breast. The overlying skin appeared stretched and shiny. Central hyperpigmentation with focal nodularity was noted, along with a peau d'orange appearance. The nipple was displaced inferiorly. There was no ulceration or nipple discharge (Figure 1).

Figure 1: Large left breast lump with stretched skin and nipple displacement.

Palpation showed the mass to be firm to hard in consistency with a lobulated and bosselated surface. The margins were well defined. The swelling was mobile over the underlying pectoralis muscle and was not fixed to the chest wall. The central skin was thickened and could not be pinched. No significant axillary lymphadenopathy was detected. The right breast was normal on examination.

INVESTIGATIONS

Ultrasonography of the Breast

Ultrasonography revealed a well defined heterogeneous hypoechoic solid lesion in the left breast. Internal vascularity was noted on Doppler study. Posterior acoustic shadowing and overlying skin thickening were present. A few subcentimetric reactive axillary lymph nodes were identified.

Core Needle Biopsy

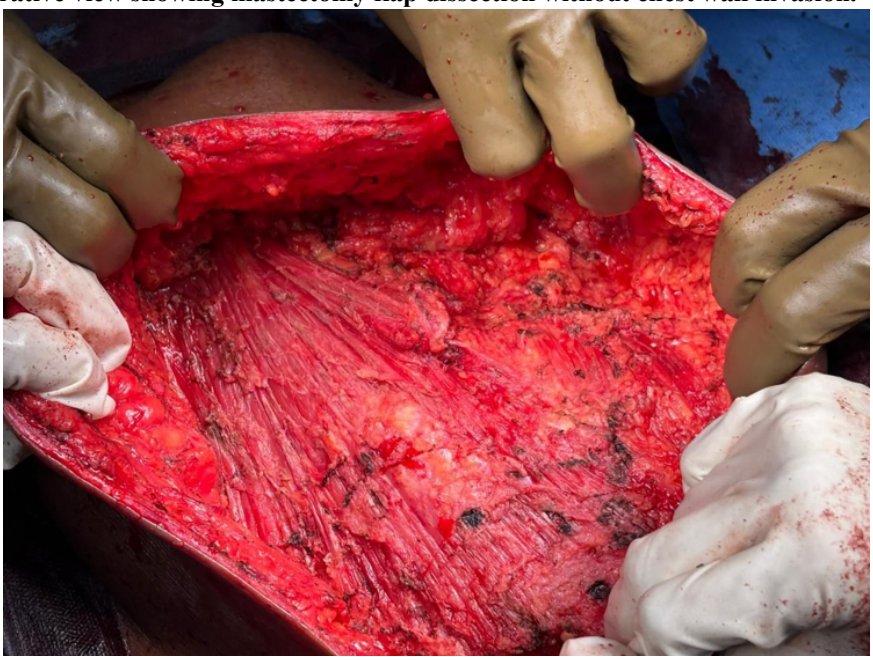
Core needle biopsy demonstrated features suggestive of a fibroepithelial lesion consistent with a phyllodes tumor. Definitive grading was deferred until excisional histopathological evaluation.

THERAPEUTIC INTERVENTION

Considering the large size of the tumor, involvement of the entire breast, and significant overlying skin changes, breast conserving surgery was not considered feasible.

A simple mastectomy was performed under general anesthesia. An elliptical incision incorporating the nipple and areola complex was made. The superior flap was raised up to the clavicle and the inferior flap was extended to the inframammary fold. Medial dissection was carried out up to the sternum, and laterally up to the anterior border of the latissimus dorsi muscle. The breast tissue was removed en bloc along with the pectoral fascia. Two closed suction drains were placed. No formal axillary dissection was performed (Figure 2).

Figure 2: Intraoperative view showing mastectomy flap dissection without chest wall invasion.



The postoperative period was uneventful and the patient recovered well.

HISTOPATHOLOGICAL FINDINGS

Gross Examination

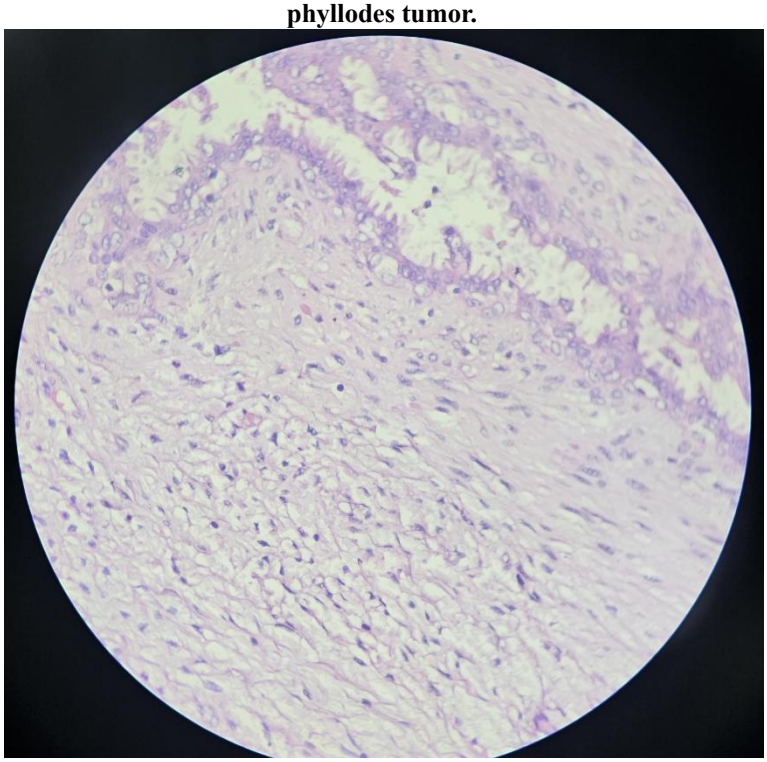
The mastectomy specimen revealed a well circumscribed, lobulated tumor mass. The external surface was smooth and encapsulated in appearance. On cut section, the tumor was firm and grey white with characteristic slit like spaces producing a leaf like pattern. No areas of hemorrhage or necrosis were observed (Figure 3).

Figure 3: Excised breast specimen with well-defined lobulated tumor mass.

Microscopic Examination

Histological examination demonstrated a biphasic fibroepithelial lesion composed of epithelial and stromal components (Figure 4).

Figure 4: Histopathology showing fibroepithelial lesion with increased stromal cellularity consistent with benign phyllodes tumor.



The following features were noted:

- Predominant stromal proliferation

- Intracanalicular growth pattern with leaf like projections
- Subepithelial stromal condensation
- Mild stromal atypia
- Mitotic activity less than five per ten high power fields
- Absence of stromal overgrowth
- No evidence of necrosis

All surgical margins were free of tumor involvement. The two excised lymph nodes showed reactive lymphoid hyperplasia with no evidence of metastasis.

Final Diagnosis
Benign phyllodes tumor.

DISCUSSION

Phyllodes tumors are uncommon fibroepithelial lesions of the breast that often pose a diagnostic and therapeutic challenge. Clinically and radiologically, they may resemble fibroadenomas, particularly in the early stages. However, certain histopathological features help distinguish phyllodes tumors from fibroadenomas (5). These include increased stromal cellularity, a characteristic leaf like architectural pattern, higher mitotic activity, and a greater tendency for local recurrence. The stromal component plays a decisive role in determining tumor behavior, and careful pathological assessment is essential for accurate grading and management (6).

Giant phyllodes tumors are rare and tend to attract attention because of their rapid growth and impressive size. As the tumor enlarges, it stretches the overlying skin, leading to thinning, shininess, hyperpigmentation, and sometimes a peau d'orange appearance. Nipple displacement and visible asymmetry are common in large lesions (7). Such alarming clinical features can closely mimic locally advanced carcinoma of the breast, causing considerable anxiety for both the patient and the clinician. Despite this resemblance, an important distinguishing feature is that lymph node involvement is uncommon in phyllodes tumors. Even in malignant cases, metastasis typically occurs through the bloodstream rather than the lymphatic system. Therefore, routine axillary dissection is not recommended unless there are clinically suspicious lymph nodes (8).

Surgical excision remains the cornerstone of treatment. Wide local excision with a minimum tumor free margin of 1 cm is considered adequate for most phyllodes tumors. Achieving clear margins is crucial, as incomplete excision is the most significant risk factor for local recurrence. However, mastectomy may be necessary in selected cases (9). This is particularly true when the tumor occupies a large proportion of the breast, when negative margins cannot be safely achieved with conservation, in recurrent tumors, or when there is extensive skin involvement. In situations where the tumor to breast size ratio is high, breast conserving surgery may not provide an acceptable cosmetic outcome, making mastectomy a more appropriate option (10).

Benign phyllodes tumors generally have an excellent prognosis following complete surgical removal. The reported recurrence rate ranges between 10 and 17 percent, most often related to inadequate surgical margins rather than aggressive tumor behavior (11). With proper surgical management and regular follow up, long term outcomes are favorable. This case highlights the importance of distinguishing giant benign phyllodes tumors from carcinoma and emphasizes that appropriate surgical planning can result in successful management with good clinical outcomes (12).

CONCLUSION

Giant benign phyllodes tumors are rare breast neoplasms that can closely mimic carcinoma because of their rapid growth, large size, and associated skin changes. Features such as skin stretching, nipple displacement, and a peau d'orange appearance may raise strong suspicion of malignancy on clinical examination. This makes careful evaluation essential to avoid misdiagnosis and overtreatment.

A systematic triple assessment comprising detailed clinical examination, appropriate imaging, and histopathological confirmation remains the key to accurate diagnosis. Histopathology ultimately determines the grade of the tumor and guides definitive management. The primary treatment is complete surgical excision with adequate tumor free margins, as margin status is the most important factor influencing recurrence.

Simple mastectomy provides a safe and definitive treatment option in cases where the tumor is large, involves most of the breast, or when breast conservation is not technically or cosmetically feasible. With appropriate surgical management and clear margins, benign phyllodes tumors carry an excellent prognosis and favorable long term outcomes.

DECLARATIONS

Ethical Approval: Not required for a single case report as per institutional policy.

Consent: Written informed consent was obtained from the patient for publication of clinical details and images.

Conflict of Interest: The authors declare no conflict of interest.

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