(International Print/Online Journal)

SJIF IMPACT FACTOR: 5.565
PUBMED-National Library of Medicine ID-101739732

ISSN (Print): 2209-2870
ISSN (Online): 2209-2862

International Journal of Medical Science and Current Research (IJMSCR)
Available online at: www.ijmscr.com
Volume 5, Issue 4 , Page No: 915-919
July-August 2022

IJMSCR

Giant Phyllodes Tumour Of Breast: Case Series

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Type of Publication: Original Research Paper
Conflicts of Interest: Nil

Abstract

Introduction: Phyllodes tumours are fibroepithelial breast tumours that exhibit a variety of biological characteristics. In the majority of cases, phyllodes tumours recur locally in about 20% of individuals. On average, malignant phyllodes tumours recur sooner than benign lesions. The arbitrary cut-off criterion for a big phyllodes tumour is 10 centimetres.

Case presentation: We present three examples of giant phyllodes tumours that manifested as a massive breast mass engulfing the entire breast with ulceration. A mastectomy was performed, as well as a partial excision of the pectoral muscles. The largest tumour specimen in our case series measured exactly 28 X 25 X 17 cm in diameter and weighed 8.4 kg, and the histology report came as a malignant phyllodes tumour with the closest margin of excision 0.5 cm away from the tumour.

Discussion: The key to achieving definitive local control is to do a wide local excision at least a 1 cm margin. Routine axillary dissection and adjuvant radiation is not necessary for benign phyllodes tumours handled conservatively with surgery with appropriate resection margins.

Conclusion*:* We concluded that appropriate diagnosis of the pathology preoperatively is critical for phyllodes tumour therapy, as it allows for proper surgical planning and avoidance of reoperation.

Keywords: Breast, Malignant Phyllodes tumour, Prognosis

Introduction

Phyllodes tumours are fibroepithelial breast tumours that exhibit a wide range of biological characteristics. These lesions, also known as "phylloides tumours" or "cystosarcoma phyllodes," are similar to benign fibroadenomas in their least aggressive form, but with a higher risk of local recurrence after excision. Although Johannes Müller developed the name "cystosarcoma phylloides" in 1838 to characterize the tumor's abnormally fleshy outward appearance, it was not intended to convey spreading potential, as the term "sarcoma" usually implies.[1] Phyllodes tumours in their most malignant form, on the other hand, can recur locally and distantly, degenerating into a sarcomatous lesion with no epithelial component.[2] Fortunately, this cancerous form of phyllodes is rare, with only around 5% of lesions ever causing distant metastases.[3] In the majority of cases, phyllodes tumours recur locally in about 20% of individuals. The majority of locally recurrent tumours have histological similarities to the original lesions, but benign phyllodes can infrequently reappear as borderline lesions. On average, malignant phyllodes tumours recur sooner than benign lesions. Total excision with clear margins (1 mm) is sufficient for benign lesions.[4] The World Health Organization

(WHO) proposes that phyllodes be divided into three subtypes: Malignant phyllodes (also known as "high grade malignant"), benign phyllodes (commonly known as "low grade malignant"), and borderline phyllodes (also known as "low grade malignant").[5]

WHO classification of Phyllodes Tumours subtypes:

Histologic Features	Benign	Borderline	Malignant
Stromal cellular atypia	Mild	Marked	Marked
Mitotic activity	<4 / 10 hpf	4–9 / 10 hpf	≥10 / 10 hpf
Stromal overgrowth	Absent	Absent	Present
Tumor margins	Circumscribed	Circumscribed or infiltrative	Infiltrative

The majority of phyllodes tumour patients are in their 40s or older, compared to women with palpable fibroadenomas. While the surgical therapy of the phyllodes tumour has been addressed several times in the literature, the arbitrary cut-off threshold for identification as a large phyllodes tumour is 10 cm.[6] Treatment usually consists of wide local excision of the tumour with a 1 cm breast margin, although bigger malignant varieties may necessitate treatment according to the specific case and number of recurrences.[7] The number of recurrences, mitotic index, bulky tumour, the status of the resection margins, and p53 and Ki67 expression may all play a role in the treatment of phyllodes tumours.[8] What was fascinating about our case was not so much the initial presentation, but the aggressiveness of this variation of phyllodes, because the mass had been excised twice previously in another hospital.

Case Presentation:

Case 1*:* In May 2021, a 51-year-old woman reported to MGIMS Sevagram, Department of General Surgery with an ulcerated tumour in her left breast. The tumour had been excised twice at another facility before it recurred. A huge ulcerating mass (>28 cm in circumference) involving the entire left breast was seen, with patches of necrosis. Axillary lymph nodes were not palpable. A malignant phyllodes tumour was discovered on a tru-cut biopsy. The patient had a complete mastectomy without axillary dissection.

On gross examination, a breast tissue sample measuring 28 X 25 X 17 cm in length and weighing 8.4kg was removed. Tan brown skin covered nearly the whole surface of the specimen. The cut surface was multinodular and exhibited variable-sized fleshy, soft to firm, off-white to ash-coloured leafy nodules. Deep margin displayed butt out smooth-surfaced nodules.

Case 2*:* In January 2019, a 48-year-old woman presented to MGIMS Sevagram, Department of General Surgery with an ulcerated tumour in her right breast causing her great discomfort. There was no history of similar illnesses in the family. She was operated on in another hospital and had a recurrence of symptoms. On inspection of the right breast, a huge ulcerating mass (>20 cm in diameter) filled the entire right breast with areas of necrosis. There were no palpable axillary lymph nodes. A breast tissue sample measuring 22 X 20 X 14 cm in length and weighing 7.1 kg was removed.

Case 3: In April 2016, a 55-year-old woman came to MGIMS Sevagram, Department of General Surgery with a tumour in her right breast. There was no significant family history. On examination of the right breast, a large ulcerating mass (>18 cm in diameter) filled the whole right breast with necrotic areas. Axillary lymph nodes were not palpable. The breast tissue was resected and measured 18 X 13 X 12 cm in length and 5.2 kg in weight.

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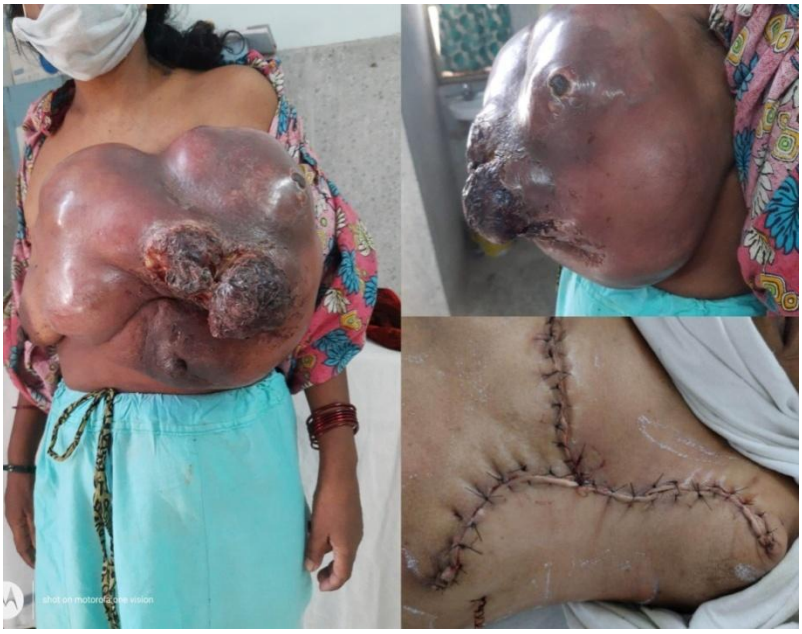
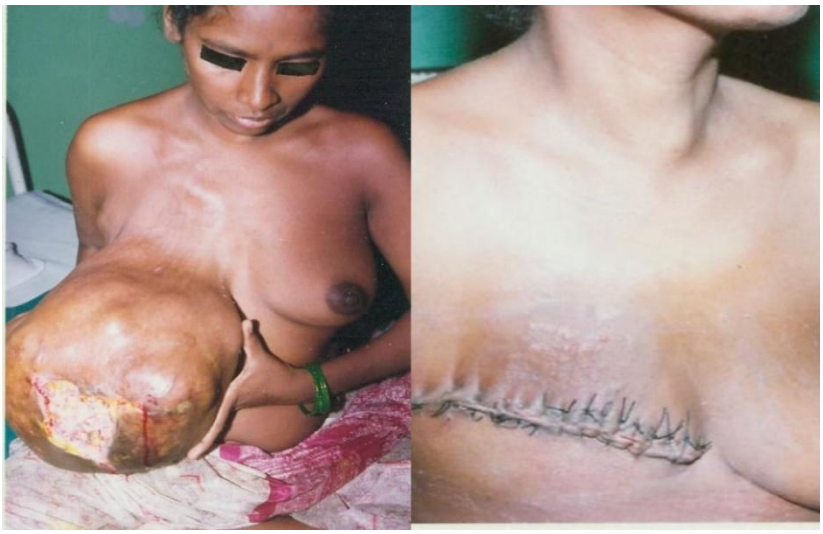
Case 1 - Preoperative clinical photo and post-operative wound



Case 2 - Preoperative clinical photo and post-operative wound



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Histopathology pictures of Case 1 patient:

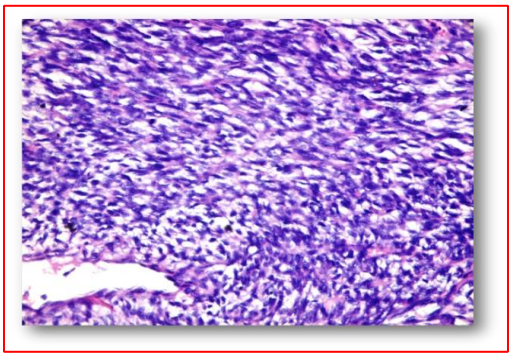

Figure A

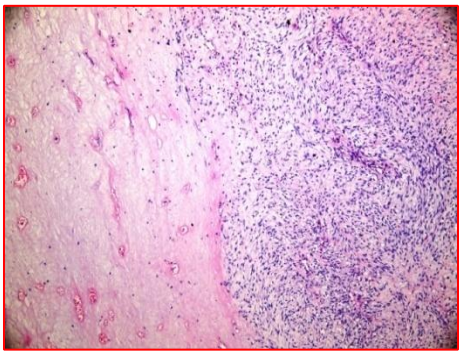

Figure B

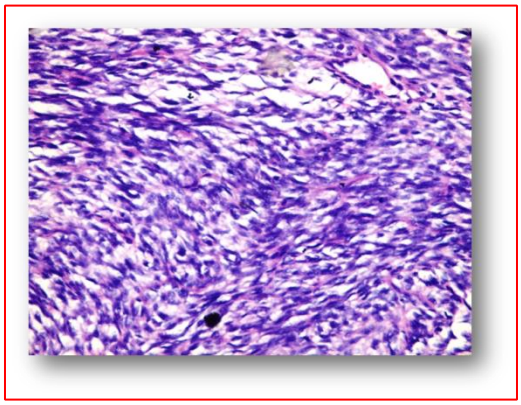

Figure C

Microscopical evidence:

Breast tissue fragments and multiple confined nodular masses were suggestive of fibro adenomatous alterations.

Figure A - Hematoxylin and eosin-stained sections revealed stromal overgrowth with bizarre-shaped spindle cells with conspicuous nucleoli and clumped chromatin (black arrow) at one end, as well as epithelial component

Figure B - Areas of necrosis are also visible

Figure C - There are many mitotic figures

Malignant phyllodes tumour of the breast was the final histological diagnosis.

Patients got adjuvant radiotherapy and are being monitored regularly.

Discussion:

Phyllodes tumours often present as a painless, palpable lump in the breast that grows over time, while some people may experience rapid growth in a previously stable, long-standing nodule.[3] When tumours spread quickly, they might cause apparent bulging. Rapid growth does not always signify the malignant nature of the tumour.

As a phyllodes tumour pushes against the skin, it can appear as shiny, stretched, and attenuated with dilated veins. Ischemia caused by pressure can result in skin ulceration. While ulceration associated with carcinoma is a sign of malignancy (T4 lesion), it does not always indicate a malignant phyllodes tumour. The nipple may be effaced, but invasion and/or retraction, as well as bloody nipple discharge, are uncommon.[3] No apparent risk factors for the development of phyllodes tumours have been identified in the general population. Patients with hereditary p53 mutations (Li-Fraumeni syndrome) have a higher risk of developing malignant phyllodes tumour, however, only a tiny percentage of detected tumours have this mutation.[9] For all types of phyllodes tumours, the key to achieving definitive local control is to do local excision with negative margins. Most studies recommend at least a 1 cm margin, which has long been the standard. Phyllodes tumours are typically surrounded by a pseudo capsule

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of dense, compressed normal tissue containing microscopic projections of the lesion. As a result, to obtain the targeted histologic margin, more tissue is frequently removed than may be expected based on preoperative physical examination or imaging findings.[10] If phyllodes tumours are removed with insufficient margins, about 20% of them recur locally. Routine axillary dissection is unnecessary in individuals with phyllodes tumours since the proportion of recurrences appears to be higher with borderline or malignant variants than with benign phyllodes tumours.[11,12,13]

Adjuvant radiation appears to be unnecessary for benign phyllodes tumours handled conservatively with surgery with appropriate resection margins. Similarly, most authors believe that mastectomy alone produces high local control rates in borderline and malignant phyllodes tumours.[14] Unfortunately, local control rates for borderline and malignant phyllodes patients tend to be poorer with lumpectomy alone.[14] After breast-conserving surgery for borderline or malignant phyllodes tumours greater than 3 cm, a study conducted by Belkacemi Y et al recommended adjuvant radiation, citing local recurrence rates of 45 percent with conservative surgery alone.[15]

Conclusion:

Appropriate surgical planning and avoidance of reoperation can be achieved by accurate preoperative diagnosis. The sensitivity of a core needle biopsy is very high. The mainstay of treatment is wide local excision, and local recurrence in phyllodes tumours has been attributed to insufficient local excision.

References:

1. Müller J. Uber den feineran Bau and die Forman der krankhaften Geschwilste. Berlin, Germany, G Reimer, 1838.
2. Chaney AW, Pollack A, McNeese MD, et al. Primary treatment of cystosarcoma phyllodes of the breast. Cancer 2000;89(7):1502–1511.
3. Petrek J. Phyllodes tumors. In: Harris JR, Lippman ME, Morrow M, et al., eds. Diseases of the breast, 2nd ed. Philadelphia: Lippincott-Roven Publishers, 2000:669–675.
4. Guillot E, Couturaud B, Reyal F, et al. Management of phyllodes breast tumors. Breast J 2011;17(2):129–37.
5. Bellocq JP, Margo G. Fibroepithelial tumors. In: Tavassoli FA, Devilee P, eds. World Health Organization classification of tumors: tumors of the breast and female genital organs. Lyon, France: IARC Press, 2003:99–103.
6. Tan P-H, Jayabaskar T, Chuah K-L, Lee H-Y, Tan Y, Hilmy M et al (2005) Phyllodes tumors of the breast the role of pathologic parameters. Am J Clin Pathol 123:529–540
7. Liang MI, Ramaswamy B, Patterson CC, McKelvey MT, Cordillo G, Nuovo GJ, Carson WE III (2008) Giant breast tumors: surgical management of phyllodes tumors, potential for reconstructive surgery and review of literature. World Jr of Surgical Oncology 6:117
8. Erhan Y, Zekioglu O, Ersoy O, Tugan D, Aydede H, Sakarya A, Kapkaç M, Ozdemir N, Ozbal O, Erhan Y (2002) p53 and Ki-67 expression as prognostic factors in cystosarcoma phyllodes. Breast J 8(1):38–44.
9. Birch JM, Alston RD, McNally RJ, et al. Relative frequency and morphology of cancers in carriers of germline TP53 mutations. Oncogene 2001;20(34):4621–4628.
10. August DA, Kearney T. Cystosarcoma phyllodes: mastectomy, lumpectomy, or lumpectomy plus irradiation. Surg Oncol 2000;9(2):49–52.
11. Guillot E, Couturaud B, Reyal F, et al. Breast Cancer Study Group of the Institut Curie. Management of phyllodes breast tumors. Breast J 2011;17(2):129–137
12. Geisler DP, Boyle MJ, Malnar KF, et al. Phyllodes tumors of the breast: a review of 32 cases. Am Surg 2000;66(4):360–366
13. Shabahang M, Franceschi D, Sundaram M, et al. Surgical management of primary breast sarcoma. Am Surg 2002;68(8):673–677; discussion 677.
14. Macdonald OK, Lee CM, Tward JD, et al. Malignant phyllodes tumor of the female breast: association of primary therapy with cause-specific survival from the Surveillance, Epidemiology, and End Results (SEER) program. Cancer 2006;107(9):2127–2133.
15. Belkacemi Y, Bousquet G, Marsiglia H, et al. Phyllodes tumor of the breast. Int J Radiat Oncol Biol Phys 2008;70(2):492–500.

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