

## Case Report

# Phyllodes tumour presenting in a rare location: a case report and literature review

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### ABSTRACT

Phyllodes tumors are rare fibro-epithelial tumors that are known to grow very rapidly in a short period. The tumor is known for its propensity to recur locally despite adequate wide excisions and even mastectomies. This case report is of a woman who had a recurrent Phyllodes tumor in a peculiar location. Phyllodes tumours are generally confined to arising from the breast; however, in this case, we found it arising from the anterior abdominal wall. The tumour was removed with a 2 cm margin of excision. The large defect that remained after excision was reconstructed using a latissimus dorsi flap, along with a split skin graft. The immediate post-operative period was uneventful. Ultrasonography did not detect a recurrence after 12 months. We presented relevant literature highlighting tumor infiltration into the anterior abdominal wall, our surgical management and reconstructive planning for closure of a large post-excision defect. In order to prevent a recurrence of phyllodes tumour, it is important to excise the tumour with wide margins of 2 cm. A multi-disciplinary team approach is essential for the reconstruction of the remaining defect.

**Keywords:** Phyllodes tumour, Rare location, Reconstruction, Radiotherapy

### INTRODUCTION

Phyllodes tumours are rare fibro-epithelial tumours that constitute 0.3-1% of breast tumours.<sup>1</sup> They commonly occur in women aged 45-49 years and are not common in adolescents and elderly women.

Phyllodes tumours are firm, lobulated, and well-defined masses which are known to grow very rapidly in a short period, and can result in skin changes that are usually attributed to pressure and stretching. Nipple retraction, chest wall fixation, bilateral disease and distant metastasis though described, are very rare.<sup>2</sup> The tumour is known for its propensity to recur locally.<sup>3</sup>

Despite adequate wide excisions and even mastectomies. We present the report of a woman who had a recurrent Phyllodes tumour in a peculiar location; we also present our management and relevant literature.

### CASE REPORT

A 53-year-old postmenopausal Indian woman presented to our outpatient department with the chief complaint of a lump in the right upper abdomen for 5 months; the lump had initially increased in size gradually but had shown a rapid enlargement in the last 1 month. This was the fourth recurrence of the lump in the last 14 years. The patient had undergone mastectomy for an ulcerated right breast lump in 2006, wide local excision for recurrence at the previous surgical site in 2008, and wide local excision again in 2012 for recurrence at the lower margin of the previous surgical site. She had no significant family history of similar disease.

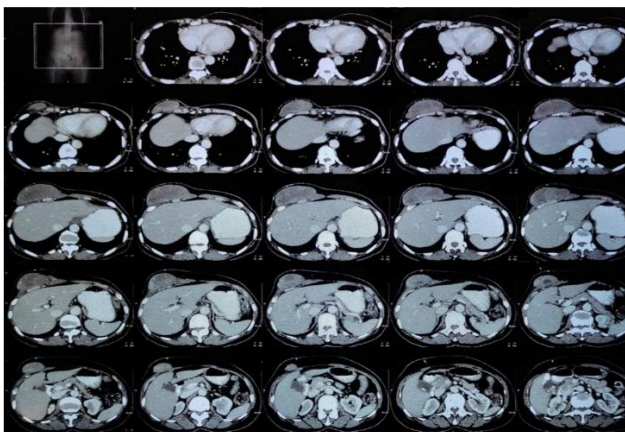
Physical examination revealed a 20×8 cm lobulated, smooth-surfaced, ill-defined firm mass in the right hypochondrium of the abdomen with a 16 cm long healed scar of previous surgery on the superior margin of the mass

on the right side of the chest (Figure 1). The overlying skin was tense with pressure changes. The contralateral breast was normal in size and without any palpable mass. Bilateral axillae and cervical regions were found to be normal, with no lymphadenopathy.



**Figure 1: 20×8 cm smooth-surfaced, ill-defined firm mass in the right hypochondrium of the abdomen with long-healed scars of previous surgery on the superior margin of the mass.**

Contrast-enhanced computed tomography (CECT) of the chest and abdomen showed a well-defined heterogeneous enhancing density measuring 98×83×66 mm within the region of the breast and extending into the subcutaneous tissue at the right hypochondrium and involving the rectus abdominus muscle adjacent to the 8<sup>th</sup> rib. The underlying pectoralis major muscle was not involved (Figure 2). Ultrasound-guided fine-needle aspiration was consistent with recurrence of Phyllodes tumour featuring moderate to high spindle cell tumour with an extensive myxoid matrix. The individual tumour cells were oval to spindle with moderate pleomorphism. No mitotic activity or necrosis or ductal epithelium was seen in the biopsy.



**Figure 2: CECT scan of chest and abdomen showing heterogeneous enhancing mass in the right lower chest and right hypochondrium region of anterior abdominal wall involving the rectus abdominus muscle.**

The surgical plan was to excise the mass with free flap reconstruction to ensure adequate closure of the defect after resection. Wide local excision of the tumour was performed with a 2 cm margin along with underlying rectus sheath, muscle and overlying skin (Figure 3). Intraoperatively, the outer cortex of 7<sup>th</sup> rib directly under the tumour was also excised, as the mass was seen abutting the anterior aspect of the 7<sup>th</sup> rib. Skin hooks were not placed on the scrub trolley to prevent the raising of skin flaps, according to our surgical unit's standard protocol as described by Goetz et al.<sup>4</sup> The defect (Figure 4) was reconstructed using a carefully planned latissimus dorsi myocutaneous flap. The flap was transposed to the defect and sutured. The remaining raw area within the defect was covered using a split-thickness skin graft harvested from the right thigh.



**Figure 3: Images showing the specimen removed and the raw area formed after resection of specimen.**



**Figure 4: Post reconstruction of the raw area with latissimus dorsi myocutaneous flap and split-thickness skin graft after repositioning patient in left lateral decubitus position.**

The final histopathology report revealed a diagnosis of malignant phyllodes. Gross examination of the cut section of the specimen revealed a greyish white tumour

measuring 12×12×8.3 cm with areas of haemorrhage and necrosis. Multiple sections showed mitotic activity of 14/10 HPF with tumour cells exhibiting moderate nuclear atypia and marked stromal hyperplasia. Superior, lateral, inferior, medial skin and soft tissue resected margins are free of tumour. Immunohistochemistry revealed that the tumour cells are diffusely immunopositive for CD34, and negative for p63, CK, EMA, ER, PR, AR, and MIC-2.

The patient did not experience any post-operative complications. Both the flap and the graft were healthy, and the patient was discharged on postoperative day 15 and was followed up in the outpatient department (OPD) on a regular basis. At the 6<sup>th</sup> month and 12<sup>th</sup> month clinical examination and ultrasonography did not show a recurrence of the tumour.

## DISCUSSION

Phyllodes tumours of the breast are rare neoplasms with a high local recurrence rate of 8-36%.<sup>2</sup> Local infiltration by the tumour is hypothesized to have deep extension into the normal tissue in the form of pseudopodia left behind despite adequate margins during excision, leading to recurrence. Phyllodes tumours are often difficult to diagnose, especially when they are of benign histology, as they can be mistaken for fibroadenoma. Recent recommendations include the use of a core needle biopsy, and not fine needle aspiration cytology, for accurate diagnosis.<sup>5</sup>

Phyllodes tumours have been reported to involve the chest wall, lungs, and the contralateral breast, but infiltration into the anterior abdominal wall has not been reported previously.<sup>6</sup> While several predictive factors for recurrence of phyllodes tumours such as younger age, larger size and aggressive histology have been described, one of the most important independent factors predictive of local recurrence and metastasis is a positive surgical margin.<sup>7</sup> The adequacy of excision is of utmost importance to ensure negative margins, and this has sparked much debate. While some advocate a 1 cm margin according to the NCCN guidelines, others advocate a 2 cm margin; it has also been suggested that the 1 cm margin recommended by the NCCN is overtreatment.<sup>4,8,9</sup> Adequacy of excision is vital, but the removal of excess normal tissue may pose an additional surgical challenge in the reconstruction of the exposed raw area. A multi-disciplinary team approach is recommended to ensure the best closure and cosmesis for the patient. We enlisted the help of plastic surgeons for the latissimus dorsi flap reconstruction.

The role of radiation therapy in phyllodes tumours is still a topic of controversy, due to inadequate data from large perspective clinical trials. It has been postulated that radiation therapy could extend the time to local recurrence and decrease the recurrence rate. In cases of malignant Phyllodes tumours, radiotherapy should be used as adjuvant therapy regardless of the type of surgery

performed (mastectomy/breast conservation therapy).<sup>10</sup> The patient in this case defaulted from receiving adjuvant radiotherapy, and this is perhaps the cause of the several recurrences. Studies on the role of radiotherapy in borderline tumours and in cases with positive histological margins, are still ongoing. The current consensus, however, is to perform re-surgery for margin revision when margins are positive.<sup>11,12</sup>

## CONCLUSION

This report highlights the varied presentation of a phyllodes tumour infiltrating into the anterior abdominal wall, the surgical management for a tumour typically associated with the breast and the reconstructive planning for the closure of a large defect.

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## REFERENCES

- Rowell MD, Perry RR, Hsiu JG, Barranco SC. Phyllodes tumors. *Am J Surg.* 1993;165:376-9.
- Barth RJ. Histologic features predict local recurrence after breast conserving therapy of phyllodes tumors. *Breast Cancer Res Treat.* 1999;57:291-5.
- Tan PH, Thike AA, Tan WJ, Thu MMM, Busmanis I, Li H, et al. Predicting clinical behaviour of breast phyllodes tumours: a nomogram based on histological criteria and surgical margins. *J Clin Pathol.* 2012;65:69-76.
- Goetz MP, Gradishar WJ, Anderson BO, Abraham J, Aft R, Allison KH, et al. NCCN Guidelines Insights: Breast Cancer, Version 3. *J Natl Compr Cancer Netw.* 2019;17:118-26.
- Ofri A, Stuart KE, Chan B, Mak C, Warriar S, Bhadri V, et al. Diagnosis and management of phyllodes tumours for the surgeon: An algorithm. *Surgeon.* 2022;1479-666.
- Barrio AV, Clark BD, Goldberg JI, Hoque LW, Bernik SF, Flynn LW et al. Clinicopathologic features and long-term outcomes of 293 phyllodes tumors of the breast. *Ann Surg Oncol.* 2007;14:2961-70.
- Wei J, Tan Y-T, Cai Y-C, Yuan D, Yang D, Wang S-S, et al. Predictive factors for the local recurrence and distant metastasis of phyllodes tumors of the breast: a retrospective analysis of 192 cases at a single center. *Chin J Cancer.* 2014;33:492-500.
- Badwe RA, Kataria K, Srivastava A. Surgical resection of phyllodes tumour: A radical approach as a safeguard against local recurrence. *Indian J Surg.* 2015;77:161-3.
- Ogunbiyi S, Perry A, Jakate K, Simpson J, George R. Phyllodes tumour of the breast and margins: How much is enough? *Can J Surg.* 2019;62:19-21.
- Chao X, Chen K, Zeng J, Bi Z, Guo M, Chen Y, et al. Adjuvant radiotherapy and chemotherapy for

patients with breast phyllodes tumors: a systematic review and meta-analysis. *BMC Cancer.* 2019;19:372.

11. Liang MI, Ramaswamy B, Patterson CC, McKelvey MT, Gordillo G, Nuovo GJ et al. Giant breast tumors: surgical management of phyllodes tumors, potential for reconstructive surgery and a review of literature. *World J Surg Oncol.* 2008;6:117.
12. Telli ML, Horst KC, Guardino AE, Dirbas FM, Carlson RW. Phyllodes tumors of the breast: natural

history, diagnosis, and treatment. *J Natl Compr Cancer Netw.* 2007;5:324-30.

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