International Journal of Research in Medical Sciences
Renteria JMM et al. Int J Res Med Sci. 2025 Oct;13(10):4336-4338
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20253187

Case Report

Breast reconstruction after radical mastectomy for giant phyllodes tumor: a case report

Jorge Moises Morales Renteria, Emiliano Ortiz Chang, Manuel Enrique de la O Escamilla*

Department of Plastic and Reconstructive Surgery, Hospital General de México, Mexico City, Mexico

Received: 16 July 2025
Accepted: 04 September 2025

***Correspondence:**
Dr. Manuel Enrique de la O Escamilla,
E-mail: manueldelao_94@hotmail.co

ABSTRACT

We present the case of a 40-year-old woman with a giant phyllodes tumor in the left breast, detected after breastfeeding and progressively growing over two years. In August 2023, a biopsy confirmed the diagnosis, and in March 2024, a radical mastectomy was scheduled, as negative surgical margins could not be guaranteed with a conservative approach. The initial intervention included vacuum-assisted closure (VAC) therapy to manage infection risk and prepare the wound for later reconstruction. Thirty days later, breast reconstruction was performed using a latissimus dorsi flap, which was elevated, dissected, and placed over the thoracic defect. The surgery was completed without complications, and the patient had a satisfactory recovery, being discharged three days postoperatively. At the three-month follow-up, the flap showed good integration and favorable evolution. This case highlights the importance of timely breast reconstruction in patients undergoing radical mastectomy for phyllodes tumors and the effectiveness of the latissimus dorsi flap as a reconstructive option in complex scenarios.

Keywords: Giant phyllodes tumor, Breast reconstruction, Latissimus dorsi flap

INTRODUCTION

In 1838, Johannes Müller was the first to describe and name this tumor as cystosarcoma phyllodes, characterizing it as a large, lobulated, cystic, and rapidly growing neoplasm.[1] Later, in 2003, the WHO histological classification group recommended the term phyllodes tumor, classifying it into three subtypes: benign, borderline, and malignant.[2]

Phyllodes tumor is a rare neoplasm, accounting for only 0.3-0.9% of all breast tumors, with 6.2% considered malignant.[3] A retrospective study in Thailand involving 188 patients reported a mean age of 35.6 years. It documented 118 benign cases (62%), 33 borderline (18%), and 37 malignant (20%), with no significant influence of surgical margins on recurrence, regardless of histologic subtype.[4]

Local recurrence has been reported in 19% of cases, while distant metastases occur in 3.4%, according to a study by Belkacémi et al involving 433 patients treated between 1971 and 2003.[5] Additionally, a retrospective study found aggressive histopathological features and worse clinical outcomes among Black women diagnosed with phyllodes tumors.[6]

CASE REPORT

A 40-year-old woman with no relevant personal or family medical history, G5P4C1, first noticed a mass in the left breast in 2022, following breastfeeding. The mass exhibited progressive growth, eventually becoming deforming.

A biopsy in August 2023 confirmed a phyllodes tumor. A surgical plan was developed by the oncology team for tumor resection involving the chest wall in March 2024.

On physical examination, a 50×30 cm mass with irregular

borders was observed on the left breast, extending from the sternal line to the mid-axillary line, with multiple abscessed, fetid lesions and pain on palpation (Figure 1).

In March 2024, after confirming the diagnosis, the patient was taken to the plastic surgery operating room. In collaboration with the oncologic surgery team, a radical mastectomy was performed, as negative margins could not be guaranteed for conservative surgery (Figure 2 A). Given the infection risk, VAC therapy was placed during the same surgical session to prepare for later reconstruction (Figure 2 B).

Thirteen days after VAC placement, with a cleaner wound and favorable evolution, the patient underwent a second procedure. The defect and desired skin island were marked, followed by dissection to locate and detach the latissimus dorsi muscle, which was then transferred to the anterior thoracic defect and closed in layers after Jackson-Pratt drain placement (Figure 3).

The patient was discharged three days post-surgery with no complications. The flap showed good color and no warning signs. At the three-month follow-up, the flap was well integrated, and the patient was discharged from the plastic and reconstructive surgery service (Figure 4).

Figure 1: (A) Anteroposterior view of a giant phyllodes tumor in the left hemithorax; (B) oblique view of the tumor.

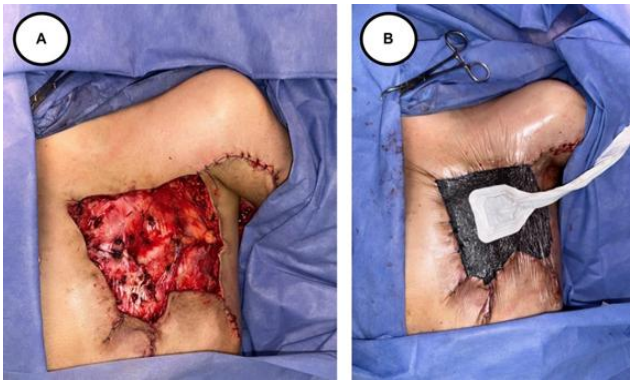

Figure 2: (A) Exposed left hemithorax after tumor resection; (B) wound with VAC therapy.

Figure 3: Reconstruction of the defect using a latissimus dorsi flap.

Figure 4: Three-month follow-up showing well-integrated latissimus dorsi flap.

DISCUSSION

This case presented several challenges, particularly due to the tumor's size, presence of abscessed lesions, and the need to ensure appropriate oncological treatment. Due to the tumor's extent and aggressive features, radical mastectomy was chosen, as conservative surgery could not ensure negative margins.

To reduce infection risk and prepare for reconstruction, VAC therapy was used in the initial surgical phase. Later, reconstruction was performed using a latissimus dorsi flap due to its reliability and robust vascular supply.

Complication rates in latissimus dorsi flap breast reconstruction vary. A study using data from the American college of surgeon's national surgical quality improvement program (ACS-NSQIP) from 2005-2012 reported an overall complication rate of 10.8%, wound complications at 4.3%, and flap failure at 1.1%.[7]

A study involving 32 patients with benign phyllodes

tumors who underwent wide local excision followed by oncoplastic reconstruction found that all achieved symmetrical and satisfactory breast shape, with no recurrence during follow-up periods ranging from 1 to 8 years.[8]

Successful reconstruction rates in phyllodes tumor patients vary, depending on tumor type and surgical extent. Major complications are relatively rare, and reconstruction can be a viable option to maintain breast form and symmetry in many cases.

CONCLUSION

Giant phyllodes tumors present significant clinical challenges due to their unpredictable behavior and extensive tissue loss following surgical treatment. Timely breast reconstruction after radical mastectomy is essential for improving patient quality of life and mitigating the psychological impact. The latissimus dorsi flap proved to be an effective option, offering adequate coverage, good vascularization, and an uncomplicated recovery. This multidisciplinary approach highlights the importance of integrating oncologic and reconstructive surgery to achieve functional and aesthetic outcomes, ultimately contributing to a more favorable prognosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Muller J. Ueber den feinen bau und die furmen der krankhaften geschwulste. Berlin: G Reimer. 1838;1:54-7.
2. Belkacémi Y, Bousquet G, Marsiglia H, Ray-Coquard I, Nicolas M, Yann M, et al. Phyllodes tumor of the breast. Int J Radiat Oncol Biol Phys 2008;70(2):492-500.
3. Guerrero MA, Ballard BR, Grau AM. Malignant phyllodes tumor of the breast: review of the literature and case report of stromal overgrowth. Surg Oncol. 2003;12(1):27-37.
4. Ditsatham C, Chongruksut W. Phyllodes tumor of the breast: diagnosis, management and outcome during a 10-year experience. Cancer Manag Res. 2019;11:7805-11.
5. Hanby AM, Walker C, Tavassoli FA, Devilee P. Pathology and Genetics: Tumours of the Breast and Female Genital Organs. WHO Classification of Tumours series-volume IV. IARC Press, Lyon, France. Breast Cancer Res. 2004;6:133.
6. Johnson HM, Anas M, Muhammad MH, Joseph G, Lauren G, Nasreen AV, et al. Race-Related Differences in the Clinical Presentation and Histopathologic Features of Phyllodes Tumor. Am Surg. 2023;89(3):407-13.
7. Massenburg BB, Paymon SM, Michael JI, Jonatan HR, Peter JT. Flap Failure and Wound Complications in Autologous Breast Reconstruction: A National Perspective. Aesthetic Plast Surg. 2015;39(6):902-9.
8. Ren J, Liyan J, Bingjing L, Rongkuan H, Guoqin J. Surgical excision and oncoplastic breast surgery in 32 patients with benign phyllodes tumors. World J Surg Oncol. 2018;16(1):153.

Cite this article as: Renteria JMM, Chang EO, De la O Escamilla ME. Breast reconstruction after radical mastectomy for giant phyllodes tumor: a case report. Int J Res Med Sci 2025;13:4336-8.