Revista Eletrônica
Acervo Saúde
Electronic Journal Collection Health ISSN 2178-2091

Phyllodes breast tumor: a case study

Tumor de mama filoides: um estudo de caso

Tumor filodes de mama: un estudio de caso

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ABSTRACT

Objective: To report the case of a patient with recurrence of borderline phyllodes tumor. **Case report:** Woman, 62-year-old, who was referred for core biopsy, presenting a nodulation that occupied the entire inferior lateral quadrant of the right breast. The patient had a history of sectorectomy in the same breast, due to a phyllodes tumor, which was removed with free margins two years prior. Subsequently, there was confirmation that the tumor had returned, through the result of an anatomopathological exam. **Final considerations:** There is still a lack of studies focusing on various aspects of this rare entity, such as clinical and histological research, highlighting the need for more scientific publications. This disease, which impacts on patients' quality of life, requires a multidimensional approach. Thus, it is possible to promote continuous development of the professionals, seeking to improve the care provided and consequently, improve patients' quality of life.

Keywords: Phyllodes tumor, Breast, Recurrence, Neoplasms of the breast, Quality of life.

RESUMO

Objetivo: Relatar o caso de uma paciente com recidiva de tumor filoides borderline. **Relato de caso:** Mulher, 62 anos, encaminhada para *core biopsy*, apresentando nodulação que ocupava todo o quadrante lateral inferior da mama direita. A paciente tinha história de setorectomia na mesma mama, devido a tumor filoides, que foi removido com margens livres há dois anos. Posteriormente, houve confirmação do retorno do tumor, por meio do resultado de exame anatomopatológico. **Considerações finais:** Ainda há carência de estudos com enfoque em vários aspectos dessa entidade rara, como pesquisas clínicas e histológicas, evidenciando a necessidade de mais publicações científicas. Essa doença, que impacta na qualidade de vida dos pacientes, requer uma abordagem multidimensional. Dessa forma, é possível promover o desenvolvimento contínuo dos profissionais, buscando melhorar a assistência prestada e, consequentemente, melhorar a qualidade de vida das pacientes.

Palavras-Chave: Tumor filoides, Mama, Recorrência, Neoplasias da mama, Qualidade de vida.

RESUMEN

Objetivo: Informar el caso de una paciente con recurrencia de tumor filodes limítrofe. **Informe de caso:** Una mujer de 62 años fue enviada para *corebiopsy*, presentando un nódulo que ocupaba todo el cuadrante

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SUBMETIDO EM: 3/2025 | ACEITO EM: 4/2025 | PUBLICADO EM: 5/2025

lateral inferior de la mama derecha. La paciente tenía antecedentes de sectorectomía en la misma mama debido a un tumor filodes, que fue extirpado con márgenes libres hace dos años. Posteriormente, el resultado del examen anatomopatológico confirmó la reaparición del tumor. **Consideraciones finales:**Todavía hay una falta de estudios centrados en diversos aspectos de esta rara entidad, como la investigación clínica e histológica, lo que destaca la necesidad de más publicaciones científicas. Esta enfermedad, que impacta la calidad de vida de las pacientes, requiere un enfoque multidimensional. De esta manera, es posible promover el desarrollo continuo de los profesionales, buscando mejorar la atención brindada y, en consecuencia, la calidad de vida de las pacientes.

Palabras clave: Tumor filodes, Mama, Recurrencia, Neoplasias de mama, Calidad de vida**.**

INTRODUCTION

Phyllodes breast tumor was initially described in 1838 by Johannes Muller, who coined it cystosarcomaphyllodes, a term no longer used. The term phyllodes refers to the foliaceous appearance of the cells under small increase optical microscopy, denoting a growth pattern. Also typical is the presence of multiple small cystic formations (LISSIDINI G, et al., 2022). It is usually seen in women aged 35 to 55 years (YU CY, et al., 2022). It is classified as benign, borderline and malignant (MPOURAZANIS G, et al., 2024). Its definitive diagnosis is made through histopathological examination, since mammography and ultrasound still have limitations when it comes to differentiating lesions, and it is not possible to distinguish the benign from the malignant form based on these tests (LIMAIEM F, KASHYAP S, 2023). The more aggressive forms exhibit similar histological characteristics, with sarcomatous lesions, and may present distant metastases to almost all organs, the lungs and bones being the most commonly affected (MPOURAZANIS G, et al., 2024).

Removal of the phyllodes tumor is the best treatment; a wide incision of the margins is necessary in cases of borderline or malignant tumors (SOUZA JA, et al., 2011). Phyllodes tumors generally grow quickly to between 4 and 7cm, or as large as 10cm in the case of giant phyllodes tumors. Surgical sample for evaluation of cell atypia, stroma, cellularity, excessive stroma growth, mitotic count (by 10 high power fields) nature of the tumor margin and state of necrosis are factors that should be evaluated when defining the Phyllodes Tumor classification, based on World Health Organization (WHO) guidelines (DAL F, HAVARE SB, 2024).

In cases of extensive surgeries such as these, breast reconstruction is associated with a better degree of satisfaction and sexual well-being (MONTES-MADARIAGA ES, et al., 2024). The tumor is painless, with a firm consistency, embossed or lobulated surface, well defined, mobile, and does not affect the skin or deep tissues; it can cause skin damage due to vascular compression caused by the size of the tumor, resulting in ulcer, erythema and edema (TORRES AJÁ L, PUERTO LORENZO JA, 2024). This article describes the case of a 62-year-old patient who was referred for core biopsy due to a large nodulation in the right breast, with a previous history of surgery (setorectomy) performed two years ago to remove a borderline phyllodes tumor, showing free margins in the anatomopathological study. This study was approved by the Ethics Committee of Research CAAE94049218.9.0000.5355 and CEP 2798837.

CASE REPORT

62-year-old female patient, white. Referred for core biopsy of the right breast due to a large tumor in the lateral inferior quadrant (**Figure 1**). She presented a previous history of nodulation in the right breast, with an ultrasound taken on 14th August 2014 describing a voluminous hypoechogenic, well-delimited nodule, with slightly lobulated margins, the largest axis parallel to the skin, measuring 5.7 x 3.0 cm, and presenting internal vascularization in the Doppler study. Also of note were small anechoic areas of cystic degeneration on the periphery of this nodule, located in the superior lateral quadrant, Birads/US 4 Category (**Figure 2**). A mammogram was performed on 19th September 2014 describing a voluminous, high-density, lobulated nodule located in the superior lateral quadrant of the right breast, measuring 60 x 50 mm, and a low-density nodule in the left breast, circumscribed, located in the superior lateral quadrant, measuring 10mm at its largest diameter Category Bi-RADS 4C (**Figure 3**).

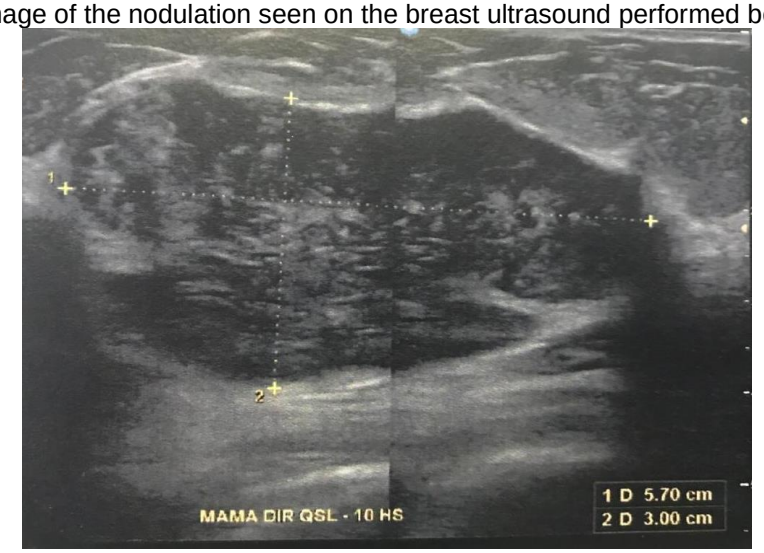
The patient was submitted to setorectomy in the right breast, in September 2015, in the description of the macroscopic examination showed: nodular portion of brown and elastic tissue, partially covered by adipose tissue, weighing 842 g and measuring 14 x 12 x 10cm. On sectioning, a cystic cavity was identified, with solid areas of chondromyxoid appearance, yellowish brown in places, and areas of hemorrhage. The lesion appears to be contained within a fibrous capsule. Anatomopathological study of the right breast sector on 16th September 2015 confirmed the diagnosis of borderline phyllodes tumor of the breast, presenting free surgical limits, mitoses less than 1 per CGA, absence of skin necrosis and adipose tissue without evidence of neoplasm. She presented the result of a fine-needle aspiration puncture of the left breast nodule, the sample from which showed several groups of fat cells without atypias.

The current mammography, on 15th March 2018, shows a voluminous nodule predominantly occupying the central cylinder and measuring 90 x 120 x 86mm (L x AP XT), a benign calcified fibroadenoma in the superior medial quadrant, measuring 4.5 x 2.5 x 6.2mm and a round, circumscribed nodule adjacent to the calcified fibroadenoma, measuring 3.5mm. Possible lymph node. Bi-RADS Classification 4C (**Figure 4**). Core biopsy of the tumor region was performed, in which several nodulations were observed, the largest measuring 2.49 x 2.14cm, and anechoic areas between these nodulations.

Figure 1 - Image of the patient in the supine position, showing the nodule in the right breast.

Source: Delgado CTMP e Bortolatto MO, 2025.

Figure 2 - Image of the nodulation seen on the breast ultrasound performed before surgery.

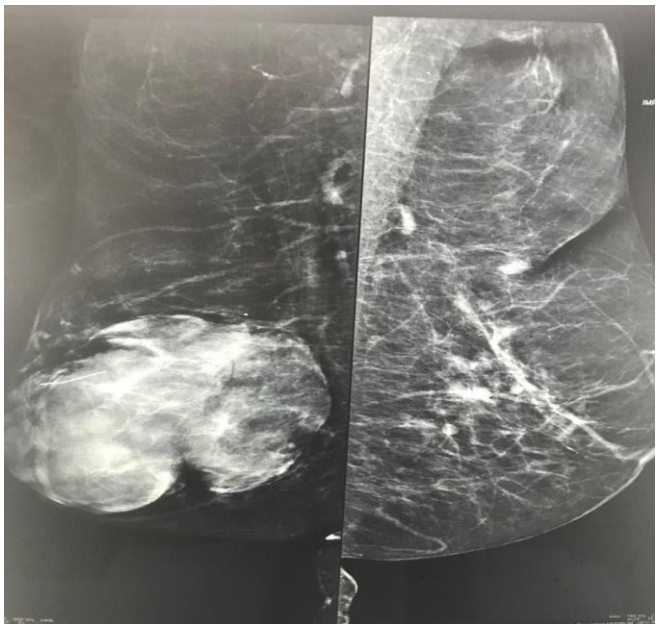


Source: Delgado CTMP e Bortolatto MO, 2025.

Figure 3 - Image of the breast lesion on the right, seen on mammography before surgery.

Source: Delgado CTMP e Bortolatto MO, 2025.

Figure 4 - Image of the right breast lesion, seen on mammography after surgery (recurrence).



Source: Delgado CTMP e Bortolatto MO, 2025.

DISCUSSION

Phyllodes breast tumor is a rare fibroepithelial neoplasm that constitutes less than 1% of all breast tumors (LIMAIEM F, KASHYAP S, 2023).Phylloides tumors share similar characteristics with other neoplasms, such as fibroadenoma and hamartoma at the benign end of this histological spectrum, and metaplastic carcinoma and sarcomas at the malignant end of the spectrum. This makes its recognition and identification extremely important, as these are essential to guide the diagnosis and treatment. The greatest difficulty is in distinguishing tumors with similar characteristics in the histopathology (RAKHA E, et al., 2021).

The main non-epithelial tumors of the breast are phyllodes tumor, sarcoma and lymphoma (MPOURAZANIS G, et al., 2024). The differences in connective tissue, such as the high mitotic count and the presence of rows of papuliferous projections, are essential factors to distinguish phyllodes tumor from fibroadenoma. Thus, it presents a basic structure that is similar to intracanalicular fibroadenoma, but with

stroma hypercellularity; hence, it can be called hypercellular fibroadenoma (LIMAIEM F, KASHYAP S, 2025). The clinical presentation is usually of a breast mass that is usually palpable in the physical examination due to its large dimensions (20% are not palpable), ranging from 1-10 cm (mean 4-7 cm) in size (TUKENMEZ M, et al., 2023). The clinical manifestation may sometimes be similar to carcinoma, but they differ in terms of prognosis and treatment (MPOURAZANIS G, et al., 2024).

The World Health Organization (WHO) divides the histopathological classification of phyllodes tumors into benign, borderline and malignant (LIMAIEM F, KASHYAP S, 2023). The tumor type in the case reported here (borderline) has the following histopathological characteristics: may include well-defined tumor borders, moderate stromal cellularity, mild or moderate stromal atypia, mitotic activity of 5-9 counts per 10 HPFS, and absence of malignant stromal growth element. Borderline phyllodes tumors represent around 14-25% of all phyllodes tumors. The speed of growth is not associated with malignity (MPOURAZANIS G, et al., 2024).

According to the case description, the present tumor showed significant growth, appearing in a different site from the presentation where the exeresis was performed, resulting in breast deformity. It is compatible with the clinical descriptions given in literature in terms of the large size that the phyllodes tumor can grow to. Below is a table with the three types of phyllodes tumors: Benign, borderline (with which the patient was diagnosed) and malignant, and their main characteristics.

The phyllodes breast tumors are classified in benign, borderline and malignant. The main characteristics of benign phyllodes tumorsare rare fibroepithelial neoplasm, practically do not metastatize and presents 0-4 mitoses in 1 large increase field. Surgical approach with complete resection of the lesion is usually the standard of treatment (YU CY, et al., 2022).

The main characteristics of borderline phyllodes tumors are rare fibroepithelial neoplasm, practically do not metastasize and when metastization does occur, it is always by the hematogenic route and it presents 5-9 mitoses in 10 fields of great increase, with infiltrative margins and minimal cell atypia of the stroma. Approximately 12-26% of this type of phyllodes tumor is borderline. Surgical approach with total resection of the lesion is the indicated treatment (MONTES-MADARIAGA ES, et al.,2024, MPOURAZANIS G, et al., 2024).

The main characteristics of malignant phyllodes tumors are unusual fibroepithelial neoplasm, high recurrence trend, up to 30%, higher recurrence rate and metastasis, distant metastasis occurs by the hematogenic route, may confused mainly with metaplastic breast carcinoma of fusiform cells or primary breast sarcoma, presents 10 or more mitoses in 10 fields of large increase, infiltrated margins and moderate or severe cell atypia of the stroma. Approximately 10 to 15% of all phyllodes tumors are malignant. The standard approach is adequate surgical resection with margins of at least 1cm to maintain local control of the malignancy. Giant phyllodes tumors, larger than 10 cm, represent about 20% of all phyllodes tumors and are difficult for pathologists to diagnose, especially when they present sarcomatous elements (SOUZA JA, et al., 2011).

The procedure applied to treat the return of the tumor is setorectomy, is in accordance with the literature, which recommends surgical resection with safety margins of at least 1cm, but without the need for enlargement if the margin is smaller (TUKENMEZ M, et al., 2023). In the case described here, free margins were achieved, as described in the anatomopathological study. There is no need for axillary surgery (LISSIDINI G, et al., 2022), as dissemination is by the hematogenic route (MPOURAZANIS G, et al., 2024).

Borderline phyllodes tumor is rare and has potential for malignancy; therefore, it should be removed with a margin of at least 1cm. There is no need for further complementation with radiotherapy. Perform clinical follow-up with the patient. As demonstrated in the case, there is a risk of recurrence (LIM RS, et al., 2021).

In malignant and borderline phyllodes tumors, the description in the literature did not show that resections with wider margins impacted lower local recurrence (MPOURAZANIS G, et al., 2024). Local recurrence is frequent, occurring in approximately 25% of cases, and is more likely in the malignant subtype (BOUTAS I, et al., 2022). The literature highlights, as factors associated with local recurrence in phyllodes breast tumors:

large tumor volume (as in the clinical case presented here), young age (not related to this case, as the patient was over 50 years of age at the first diagnosis), mitotic activity (the description of the anatomopathological study showed low mitotic activity), tumor necrosis (the case analyzed did not present necrosis), and a positive margin or less than 1cm (free surgical limits)(MPOURAZANIS G, et al., 2024).

Mammography and breast ultrasound showed changes. The description in the literature does not define diagnosis or differentiate the three types of phyllodes tumor (TORRES AJÁ L, PUERTO LORENZO JA, 2024), and histopathological examination, as performed in the present case, is the gold standard for diagnostic confirmation. As regards adjuvant therapies such as radiotherapy and/or chemotherapy, there are contradictory results in the literature and their application is controversial. These therapies were not applied in the present case.Re-excision is indicated when the margins are compromised after surgery (DAL F, HAVARE SB, 2024), and was also not necessary in this patient's case.

Studies on survival in relation to breast disease are not sufficient; quality of life is also now an important measure of result in clinical research. The positive change that occurred after the trauma of breast disease can give people more capacity for growth in their lives, prompting them to seek new goals, meaning and beliefs. The health professional should be prepared to offer this support and assist the patient, along with a multiprofessional team, to strengthen their resilience (DURAN S, et al., 2024).

In the case of young women with a recurrence of breast disease causing breast deformities, when resilience is worked on through psychology, the patient is able to become stronger and better overcome the pathology (LI S, et al., 2024b). Family resilience and social support improve the meaning of life in women with breast disease, therefore interventions that support and interfere in this sense should be carried out (FU Y, et al., 2024).Resilience also helps to improve sleep disorders and loneliness, that is, the greater the resilience, the less the sleep disorder and the feeling of loneliness and stress (BAN Y and BAN H, 2024). Self-care and social support and increased resilience interfere in the reduction of depression (TANG XY, et al., 2025).

The breast, being a sign of femininity, when damaged by deformations or surgical removal results in changes in body image, suffering, negative impact and decreased sleep quality (LI S, et al. 2024a). Strengthened marital relationships help women to recover their self-esteem and restore their body image, improving their quality of life (HOU TC, et al., 2024).

In the present case, we observed the breast changes that the patient went through, twice, causing body modification, distortion and breast deformity, followed by surgery. This also changed its morphology again. Follow-up to increase its resilience is essential, because the disease changes the relationship between the patient and her sexuality and affects her quality of life.

Nowadays, the multidimensional vision, which encompasses all aspects in which the patient is involved, is of great importance for a better quality of life, seeking to strengthen the resilience of the patient who is going through an adverse situation again.

The report of this type of pathology is important due to its rarity when non-epithelial breast tumors are observed. The main treatment is total exeresis of the tumor. For greater scientific knowledge of this phyllodes tumor and its possible recurrence, more publications on such cases are necessary. The current assessment of quality of life and building stronger resilience is necessary, since health includes a good quality of life. Thus, we will have more data to clinically observe and study its evolutionary aspect.

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