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Phyllodes Tumors Of The Breast: A Single Case And Review Of The Literature

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Abstract *: Les tumeurs phyllodes du sein sont des tumeurs fibroépithéliales similaires aux fibroadénomes, mais à composante conjonctive prédominante. Elles sont composées d'un stroma conjonctif et d'éléments épithéliaux. Elles sont rares, avec une incidence de 0,3 à 0,9 % de l'ensemble des néoplasies mammaires. La comparaison de nos résultats avec les données de la littérature internationale montre que le diagnostic des tumeurs phyllodes est histologique. Le traitement repose sur la chirurgie. La radiothérapie adjuvante est très importante chez les patientes présentant un risque élevé de récidive locale.*

I. INTRODUCTION

Phyllodes tumors of the breast represent 0.3 to 1% of breast tumors.[1] This pathology affects patients aged 35 to 50 years. Histologically, this tumor differs from fibroadenoma by a more abundant and more cellular stroma. Treatment is surgical. Locoregional or metastatic recurrence may occur depending on the histological grade of the tumor.[2] Unhealthy use of the surgical specimen is a risk factor for recurrence. Complementary treatments (radiotherapy, chemotherapy) have not proven effective. Through our study and a review of the literature, we wish to highlight the clinical, paraclinical, prognostic, and therapeutic characteristics of phyllodes tumors of the breast.

II-OBSERVATION

Ms. Najat, 49 years old, single, nulligravida, with no family history of mammary or gynecological neoplasia, presented with a swelling in her left breast, with a biopsy that suggested a benign phyllodes tumor.

Clinical examination: body mass index of 28, normal breast size 12/6.

Breast examination: Left breast: large, soft, well-demarcated mass with irregular polylobed contours measuring 20 cm by 18 cm, painless, mobile in both planes, with no nipple discharge. No cutaneous or inflammatory signs.

Right breast: no findings. Axillary area clear. The rest of the examination is normal. MAMMOGRAPHY

Large, highly suspicious tumor occupying the lower quadrants of the left breast with an ipsilateral axillary PDA of 13 mm. Left breast classified as BIARDS 4, right breast as BIRADS 1.

Ultrasound-guided biopsy: benign phyllodes tumor (Grade) ?. OBG: normal, Chest X-ray: normal. Therapeutic program: Lumpectomy of the left phyllodes breast.

In the operating room

. Under general anesthesia.

. Large phyllodes tumor of the left breast with ulceration at 9 o'clock.

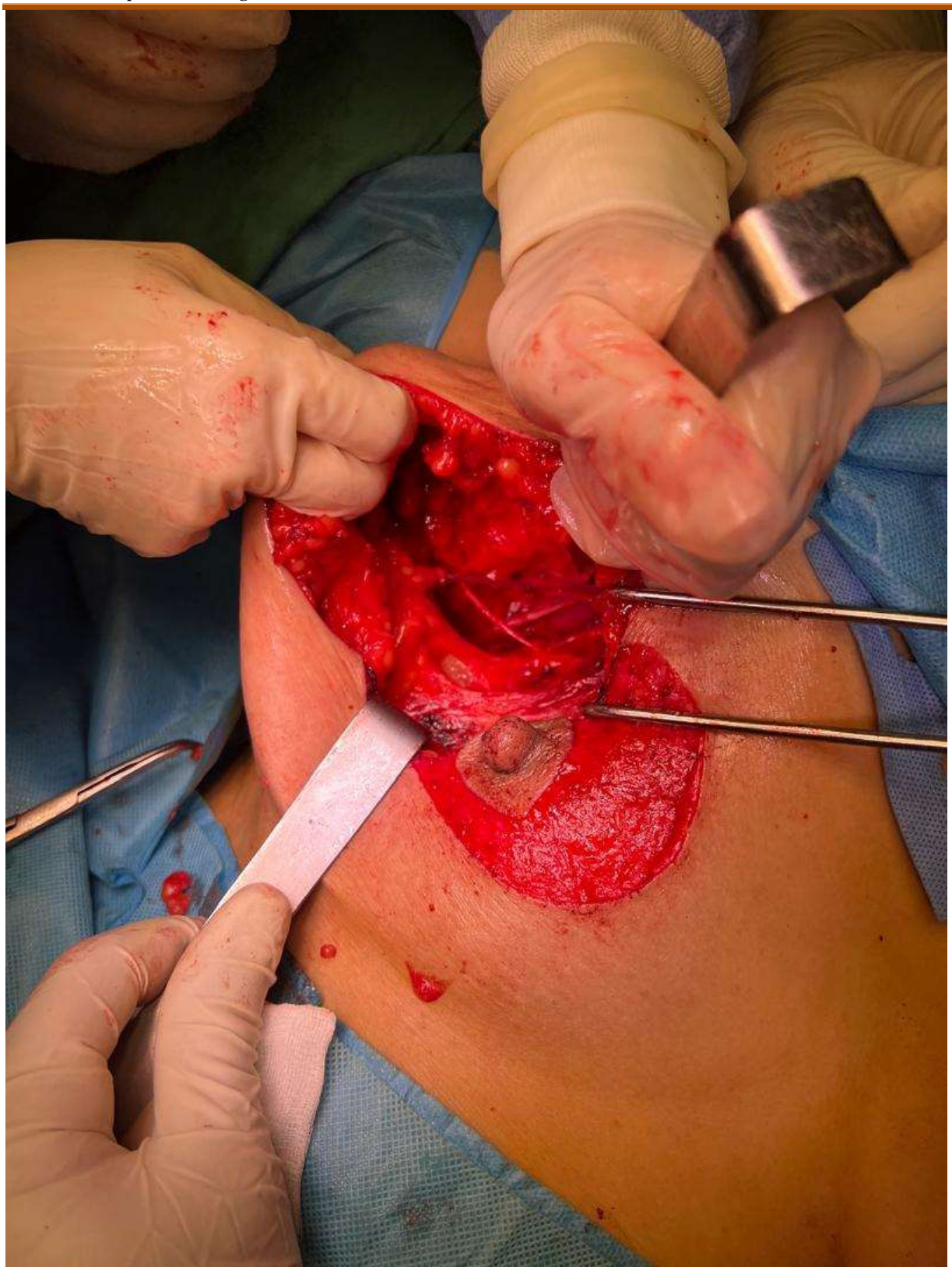

Figure 1: tumorectomie

III- DISCUSSION

Phyllodes tumor is a rare breast tumor. The age of onset of this tumor is between 35 and 55 years, on average about ten years later than a fibroadenoma.[3] In our study, the age was 50 years. The tumor most often occurs in nulliparous patients, which was also found in our study. Tumors are rarely bilateral and rarely associated with cancer.

1. Etiopathogenesis

The pre-existing fibroadenoma–phyllodes tumor relationship has been raised by several authors due to the morphological similarity between these two lesions. The presence of a fibroadenoma was reported in 16% of cases in the Grimes series. However, some authors have reported that phyllodes tumors can develop de novo. Noguchi et al. showed that most fibroadenomas have polyclonal elements and should be considered hyperplastic rather than neoplastic lesions. It has been suggested that in a proportion of fibroadenomas, they may arise from a somatic mutation in the form of a monoclonal proliferation that is histologically indistinguishable from the polyclonal element, but has the property of local recurrence and progression to mammary phyllodes tumor. Clonal analysis of histological specimens from patients who had sequential development of fibroadenomas and mammary phyllodes tumors at the same site showed that both lesions were monoclonal and expressed the same inactivated allele, which appears to support this hypothesis.[3]

A Belgian genetic study published in 1998[4] found chromosomal abnormalities located on chromosomes 1q and 10q. Chromosome 1 abnormalities are the most common and are often accompanied by a low grade of malignancy.

2. Anatomopathology

Macroscopically, mammary phyllodes tumors are characterized by variable sizes, up to 40 cm. In our series, the tumor size was large, with a mean of 10.25 cm and ranges from 1 to 30 cm. They are well circumscribed with alternating fibrous and cystic areas. Microscopically, mammary phyllodes tumors have a dual epithelial and connective tissue or stroma component, both essential for confirming the diagnosis. The latter determines malignancy. Primary breast tumors with pure sarcomatous differentiation and the absence of an epithelial element should be considered soft tissue sarcomas.[4] The differential diagnosis also arises with fibroadenomas, which are distinguished from mammary phyllodes tumors by their hypocellular stroma, with few mitoses and little evidence of pleomorphism. However, it has been shown that fragments of hypercellular stroma can also appear in fibroadenomas; therefore, it cannot be used as the sole diagnostic criterion.[4,5]

Mammary phyllodes tumors can be classified into three categories: benign, borderline, and malignant based on the histological characteristics of the tumor which include margins, stromal cellularity (minimal or abundant), disproportionate proliferation of stromal elements, or stromal overgrowth.

(absent, mild or severe), tumor necrosis (present or absent) and mitotic index. The most widely used classification is that proposed by Azzopardi[6] and Salvadori et al. Other pathological classifications have defined similar categories but based on slightly different histopathological criteria.[4,7] Some have considered the designation of borderline lesions unnecessary. The heterogeneity of mammary phyllodes tumors, sampling errors and the lack of standard interpretation of histological features are important factors in determining the relative proportions of benign, borderline and malignant mammary phyllodes tumors in different series.

An immunohistochemical study by Dacic et al.[8] demonstrated that Ki 67 and stromal P 53 positivity was more often associated with high-grade mammary phyllodes tumors; therefore, Ki 67 expression may help to distinguish between benign and malignant mammary phyllodes tumors in cases of difficult diagnosis. Hormone receptor assays in the tumor show frequent expression of progesterone receptors. Indeed, 40% of mammary phyllodes tumors do not express estrogen receptors, but do express progesterone receptors. The hormonal dependence of mammary phyllodes tumors remains controversial because no response to hormonal treatment is observed for mammary phyllodes tumors expressing hormone receptors. This is why none of our patients benefited from hormone receptor testing.

3. Diagnosis

Clinically, a palpable breast nodule is most often present. All aspects can be seen, from a small, mobile, circumscribed tumor measuring a few centimeters, suggestive of a fibroadenoma, to large tumors occupying the entire breast (mean: 6.4 cm), similar in diameter to that found in our series, which was 20 cm. Tumor size does not appear to be related to malignancy. Bilaterality is

rare; it was only observed in one patient in our series. On clinical examination, the tumor is painless, bumpy or multilobed, mobile, and located in the upper outer quadrant in 30% of cases. It displaces surrounding tissue and is sometimes responsible for worrisome skin abnormalities when large. There is no lymph node involvement, but the lymph nodes may be enlarged in 20% of cases due to inflammation. Our patient had a large, multi-lobed, mobile, painless tumor with free axillary areas.

Radiologically, the study by Yilmaz et al.[9], which performed mammograms on 31 patients, found significant hyperdensity in phyllodes tumors compared to the adjacent breast parenchyma. On ultrasound, certain signs are quite specific for phyllodes tumors.

The presence of an acoustic shadow cone and numerous vessels with a resistance and pulsatility index, as well as a high maximum velocity in color Doppler mode, may indicate the presence of tumor tissue. This notion of tumor hypervascularization is specifically found on ultrasound in the study by Madjar et al. Cytopathologically, given that mammary phyllodes tumors and fibroadenomas belong to the spectrum of fibroepithelial lesions, the exact cytological diagnosis of mammary phyllodes tumor by fine needle aspiration cytology can be difficult. In cytology, it is often easier to differentiate a benign from a malignant mammary phyllodes tumor than it is to separate a mammary phyllodes tumor from a fibroadenoma. In clinical practice, the presence of both epithelial and stromal elements in the fine-needle aspiration cytology supports the diagnosis of a mammary phyllodes tumor. For Scolyer et al The presence of hypercellular stromal fragments was the most used feature to distinguish mammary phyllodes tumors from fibroadenomas, and the presence of cellular atypia of the stroma was the most important feature to separate malignant from benign TPS. Studies have shown that cytology is not sufficient for the diagnosis of mammary phyllodes tumor. Furthermore, Bhattarai et al.[11] specified that the cytological diagnosis and the grade of mammary phyllodes tumors could be established by fine needle aspiration cytology. Of 80 cases of mammary phyllodes tumor, they diagnosed 71.3% and found that 81% of them had good histological correlation.

4. Treatment

The treatment of mammary phyllodes tumors is surgical; adjuvant treatments are of little benefit. Indeed, our patient was treated surgically. For benign and borderline tumors, it is accepted to perform wide lumpectomies with a safety margin of 2 cm.[5] In our case, the patient underwent a lumpectomy. For malignant tumors, the old school supported simple mastectomy. Currently, most authors recommend wide excision with a microscopic margin of one centimeter for all types of benign, borderline, or malignant mammary phyllodes tumor. Total mastectomy (without curettage) remains reserved for lesions too large to allow for microscopic margin of one centimeter without significant breast deformation, or multirecurrent tumors despite adequate margins.[12]

Surgical treatment is guided by the results of the extemporaneous examination. Since the proportion of axillary metastases in malignant mammary phyllodes tumors is less than 10%, axillary dissection is not routinely recommended. Furthermore, since even palpable axillary lymphadenopathy in malignant mammary phyllodes tumors is almost always reactive, axillary dissection will only be performed in cases of clinically suspicious lymphadenopathy whose metastatic nature has been previously confirmed histologically.[5]

Radiotherapy is only useful for malignant and borderline mammary phyllodes tumors.[13] Its aim is to reduce local recurrences but has no impact on survival. After surgery, the indication for adjuvant radiotherapy is discussed according to tumor size, the quality of surgical margins and the anatomopathological characteristics of the tumor (mitotic index, presence of tumor necrosis, cellular atypia and rapid stromal growth). Radiotherapy is delivered at a dose of 50 Gy in the chest wall with a boost of 10 to 15 Gy in case of involvement of the surgical sections. The authors agree not to irradiate the axillary areas.

Chemotherapy and hormonal therapy are not very effective in the metastatic phase. Low response rates have been observed in lung metastases, local recurrences, and rarely in bone metastases, with ifosfamide-based chemotherapies alone or in combination with doxorubicin (dose ≥ 60 mg/m2). Other agents such as cisplatin in combination with doxorubicin and etoposide have been used.

5. Prognosis

All benign, borderline, or malignant mammary phyllodes tumors can recur locally, and all have metastatic potential.[5] Recurrences occur two to three years after surgical excision.

Local recurrences occur in 0–59% of cases in the literature.[14] They are found, depending on the case, with a frequency of 6–10% for benign tumors and 30–40% for malignant tumors. It is not clear to all authors whether malignant mammary phyllodes tumors have an increased risk of recurrence compared to

Benign mammary phyllodes tumors occur, but recurrences occur earlier than for benign mammary phyllodes tumors. Predictive factors for recurrence are primarily related to the resection margins (1 to 2 cm) and the histoprognostic grade determined by the histological type.[14]

IV: CONCLUSION

Comparison of our results with data from the literature showed that the diagnosis of phyllodes tumor is primarily histological. The basis of treatment is surgery, as the tumors are large at the time of diagnosis. Adjuvant radiotherapy is reserved for malignant and large mammary phyllodes tumors. Chemotherapy appears to have an ill-defined role. Prognosis is based on the histological characteristics of the connective tissue component of these tumors.

V-REFERENCES

1. Rowell MD, Perry RR, Hsiu JG, Barranco SC. Phyllodes tumors. Am J Surg, 1993; 165: 376-9.

2. Mangi AA, Smith BL, Gadd MA, Tanabe KK, Ott MJ, Souba WW. Surgical management of phyllodes tumors. Arch Surg, 1999; 134: 487-92.

3. Noguchi S, Yokouchi H, Aihara T, Motomura K, Inaji H, Imaoka S, et al. Progression of fibroadenoma to phyllodes tumour demonstrated by clonal analysis. Cancer, 1995; 76: 1779–85.

4. Kanouni L, Jalil A, Saâdi I, Sifat H, Hadadi K, Errihani H, et al. Management of phyllodes tumors of the breast at the National institute of oncology of Rabat Morocco. Gynecol Obstet Fertil, 2004; 32: 293–301.

5. 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: 27–37.

6. Azzopardi JG. Sarcoma in the breast. In: Benningron J, editor. Problems in breast pathology, II. Philadelphia: WB Saunders, 1979; 355–9.

7. Pietruszka M, Barnes L. Cystosarcoma phyllodes: a clinicopathological analysis of 42 cases. Cancer, 1978; 41: 1974–83.

8. Dacic S, Kounelis S, Kouri E, Jones MW. Immunohistochemical

profile of cystosarcoma phyllodes of the breast: a study of 23 cases. Breast J, 2002; 8: 376–81.

9. Yilmaz E, Sal S, Lebe B. Differentiation of phyllodes tumors versus fibroadenomas. Acta Radiol, 2002; 43: 34–9.

10. Parker SJ, Harries SA. Phyllodes tumours. Postgrad Med J, 2001; 77: 428–35, 144: 341–3.

11. Bhattarai S, Kapila K, Verma K. Phyllodes tumor of the breast. A cystohistologic study of 80 cases. Acta Cytol, 2000; 44: 790–6.

12. Chaney AW, Pollack A, McNeese MD, Zagars GK, Pisters PW, Pollock RE, et al. Primary treatment of cystosarcoma phyllodes of the breast. Cancer, 2000; 89: 1502–11.

13. Belkacémi Y, Bousquet G, Marsiglia H, Ray-Coquard I, Magné N, Malard Y, et al. Phyllodes tumor of the breast. Int J Radiat Oncol Biol Phys, 2008; 70: 492–500. Epub 2007 Oct 10.

14. Khabouze S, Chbani M, Baydada A, Rhrab R, Chahtane A, Kharbach A, et al. Tumeurs phyllodes du sein (à propos de 14 cas). Maroc Med, 2001; 23: 192–6.