

Case Report

Management of infected, recurrent and non-metastatic malignant tumor phyllodes

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Abstract: Phyllodes tumors of the breast (PTB), also termed phyllodes tumors, are rare tumors (<0.5% of all breast tumors), comprised of both stromal and epithelial elements. They are graded by the use of a set of histologic features into benign, borderline, and malignant subtypes. The mainstay of treatment of non-metastatic phyllodes tumors of the breast is complete surgical resection with wide resection margins. Several predictive factors of recurrence and metastases have been described in the literature, such as positive surgical margins, increased stromal cellularity, stromal overgrowth, stromal atypia and increased mitotic activity. There is no proven benefit of radiation or chemotherapy, although radiotherapy may be useful in selected cases. We present a case of three episodes of recurrence in a malignant phyllodes tumor.

Keywords: Malignant, Phyllodes, Tumor, Radiotherapy

INTRODUCTION

Malignant phyllodes tumors of the breast or sarcomas phyllodes are fibroepithelial neoplasms that represent less than 1% of breast cancers [1]. In 1981, the WHO (World Health Organization) classification has identified three categories of phyllodes tumors of the breast (PTB): benign, borderline and malignant [2].

Malignant phyllodes tumors are the most aggressive histologic subtype with a non-negligible risk of locoregional or metastatic recurrence. If surgery is the standard initial treatment, the respective roles of chemotherapy and radiotherapy are not yet well defined [3].

CASE REPORT

A 38 year-old female, with no medical history, was admitted for treatment of locally advanced left breast tumor. The onset of his illness was a year ago by the discovery in self-examination of a nodule in the left breast, increasing gradually in size. Mammography showed retroareolar lobulated opacity measuring 3 cm (Fig 1), with heterogeneous echogenicity and posterior enhancement in ultrasound. The biopsy of the nodule was in favor of a low grade phyllodes tumor. In the meantime, the woman became pregnant, and consults at 15 days postpartum with a huge tumor by 20 cm infected with ulceration taking the nipple and leaving a crater 6 cm in diameter (Fig 2).

The patient received daily care, combined with antibiotics (amoxicillin and ciproxin) with good evolution. A biopsy of the infected tumor shows a low grade phyllodes tumor. The assessment of extension was with no anomaly. The patient underwent a mastectomy.

Histological study of mastectomy was in favor of a high-grade phyllodes tumor. All limits of resection were tumoral (Fig 3). A decision to resume the tumor bed was taken. But the evolution is marked by the appearance one month after surgery of several masses spreading facing the mastectomy scar and at the axillary tail.

Chest MRI and biopsy was in favor of tumor recurrence (Fig 4). The patient has benefited from the recovery of the tumor bed and axillary lymph node dissection. Pathological study of recovery returned for sarcoma phyllodes with limits of excision always achieved. The patient received 30 sessions of adjuvant radiotherapy, with the appearance 3 months after of a second local recurrence. It was an adherent mass to the pectoral muscle, which was resected with establishment of a skin flap and whose pathological results had come back for a recurrence of sarcoma with limits this time passing in healthy areas. Currently, the patient is asymptomatic for 2 years with assessment of extension still remained negative.



Fig-1: Mammographic appearance of the tumor



Fig- 2: Aspect of the tumor before surgery

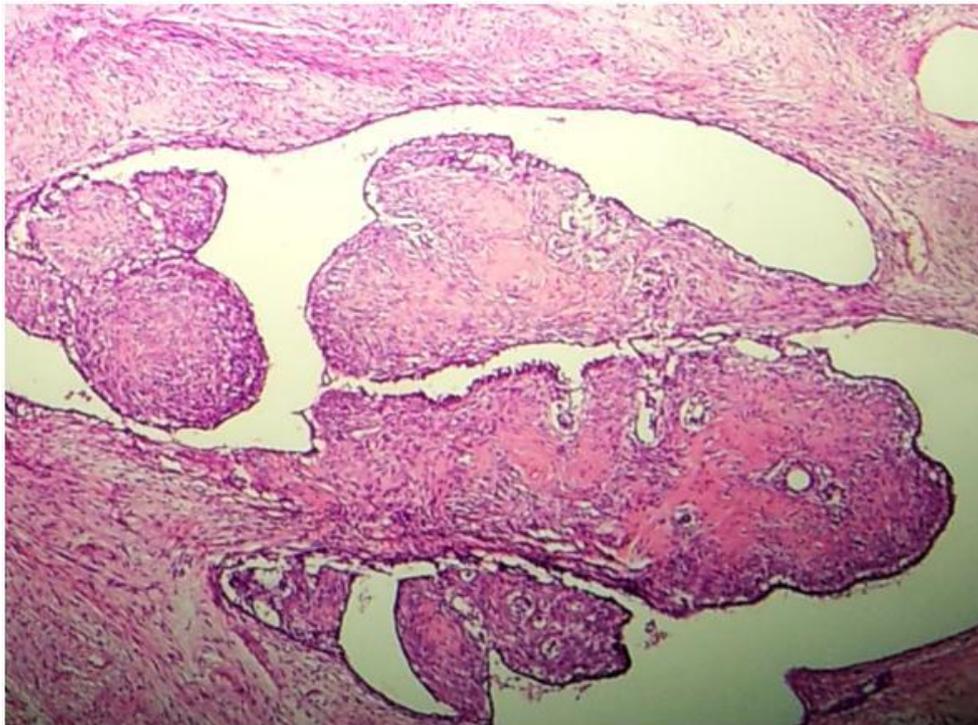


Fig-3: Histological analysis of the surgical specimen demonstrated stromal and epithelial components arranged in undulating configuration with several slit-like spaces and crevices. The protrusion of the stromal part into the ductal lumen gives it the characteristic “leaf-like” appearance (H & E).

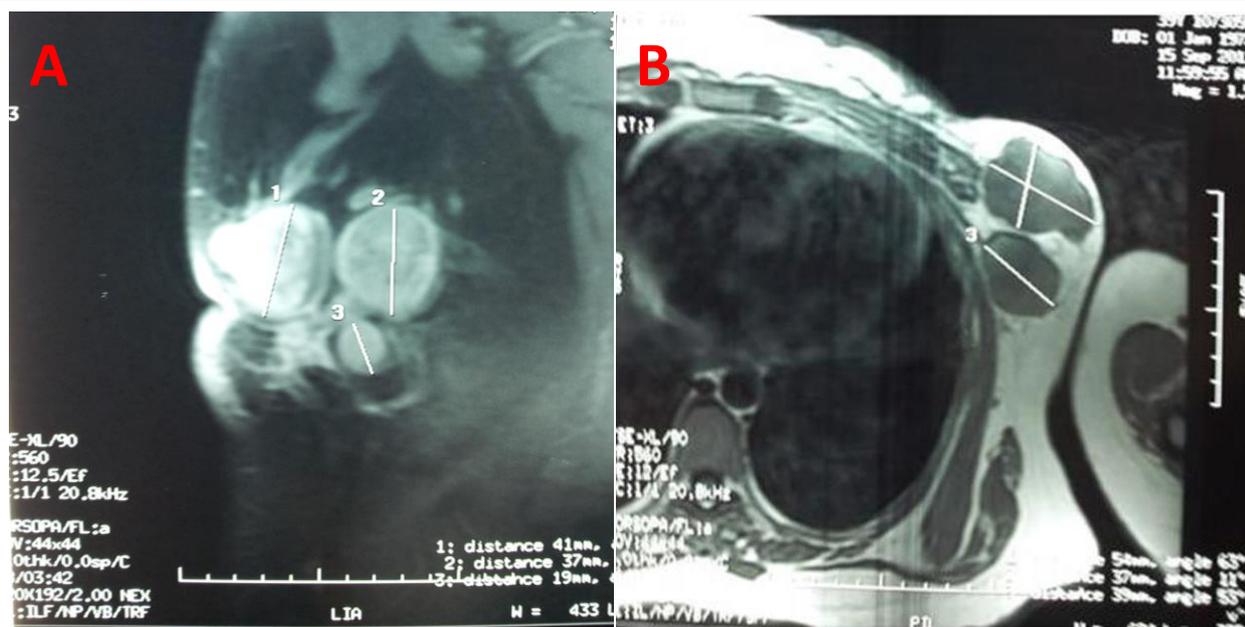


Fig-4: Frontal (A) and axial (B) section of thoracic MRI showing two heterogeneous cystic masses indicating tumor recurrence

DISCUSSION

The phyllodes tumor of the breast (PTB) is a rare breast tumor. The age of onset of this tumor is between 35 and 55 years [4] and the median of age is 33.4 years [3].

The diagnosis is histological and will be confirmed on the operating specimen and not on breast biopsy [3]. Biopsy therefore provides diagnostic orientation for histological type but not concluded on the histopronostic grade as the case of our patient.

Clinically, there is often a palpable breast nodule. All aspects can be seen from the small tumor of a few centimeters, mobile, well-circumscribed, evoking a fibroadenoma, to large tumors occupying the entire breast [5]. There is no lymph node involvement, but nodes may be increased in size in 20% of cases because of the inflammation [5].

On mammographic plan, it is usually larger masses of water tone, homogeneous and polylobulated which may be associated with calcifications which are not suspicious, resembling a fibroadenoma [6]. In breast ultrasound, there are unique or multiple heterogeneous hypochoic masses which are generally well limited [7]. These tumors cannot be differentiated on ultrasound from fibroadenomas nor well circumscribed malignant tumors.

Macroscopically in histological study, PTB are characterized by various sizes, and can reach up to 40 cm [7]. Microscopically, PTB have a double component: epithelial and conjunctiva. The latter determines the malignancy. They 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 rich), the disproportionate proliferation of stromal elements, tumor necrosis (present or absent) and mitotic index [8].

Surgery is the basis of treatment. Complete surgical resection with wide resection margins (at least 1 cm) should be performed, except for lesions larger than 10 cm in which total mastectomy is recommended, as our patient. If the initial surgery does not go into healthy margin, it is recommended that the patient should undergo reexcision to obtain a wider margin in order to prevent local recurrence. Mastectomy remains reserved for large tumors for a microscopic margin of one centimeter without significant deformation of the breast, or recurrent tumors despite adequate margins [9]. Surgical treatment is guided by the results of the extemporaneous examination.

Since metastasis to the lymph nodes occur in less than 5% of patients, axillary dissection is not routinely recommend. In the case that mastectomy fails to produce a 1 cm margin, postoperative radiation has been suggested as another treatment option [4].

Radiotherapy has no interest for malignant and borderline TPS. It reduces local recurrence but has no impact on survival. It is especially recommended in some cases (third local recurrence or recurrence after mastectomy, tumor grade 3). Chemotherapy and hormonal therapy have little effect in metastatic phase [7]. All PTB may recur locally and all have metastatic potential. Predictive factors of recurrence are mainly related to surgical margins (1-2 cm) [10], the SBR grading determined from the histological type [11, 12].

The survival rate at five years was 82.9% with 66.1% for malignant tumors [7, 13].

CONCLUSION

The diagnosis of phyllodes tumors is essentially histological. The mainstay of treatment is surgery. Adjuvant radiotherapy is reserved for malignant and large phyllodes tumors of the breast. Chemotherapy seems to have an indefinite role. The prognosis is based on the histological characteristics of the component of conjunctive tissue of these tumors.

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