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Phyllodes Tumors of the Breast Apropos of 20 Cases: Experience of the Military Hospital Moulay Ismail Meknes

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Abstract **Original Research Article**

Phyllodes tumors of the breast are rare fibro-epithelial tumors, representing 1% of primary breast tumors. Their diagnosis is histological. The aim of our work is to determine the epidemiological, clinical, histological, therapeutic, and prognostic characteristics of these tumors. This is a retrospective study conducted in the gynecology department at the MOULAY ISMAIL Meknes military hospital, over a period of 10 years, involving 20 patients who had histologically proven breast phyllodes tumors. The average age of onset of phyllodes tumors was 32 years, 80% of patients were multiparous. The mode of revelation was clinical, dominated by the increase in breast volume in 90% of patients, the right breast was the most affected by the tumor, and the QSE was the site of 60% of these tumors. The average tumor size was 6 cm. Confirmation of the diagnosis was histological after micro biopsy or lumpectomy, and conservative treatment was decided in 90% of cases while 10% benefited from radical treatment. Radiation therapy was reported in 2 women. The follow-up was marked by a favorable evolution in 16 cases, 2 cases of death were noted, while two women presented a local recurrence and were revised surgically. Phyllodes tumors of the breast mainly affect young women, and their treatment is based on surgery with a healthy excision margin greater than 1 cm. The evolution is marked by local recurrences, and most often lung or bone metastases. The prognosis is based on the histological characteristics of the tumor and on the quality of the surgical excision.

Keywords: Breast, Phyllodes tumors, Diagnosis, Surgery, Prognosis.

INTRODUCTION

The phyllodes tumor (PT) is a solid, nodular tumor, made up, like the fibroadenoma, of a double epithelial and conjunctiva proliferation, but distinguishing itself by the hypercellularity of the stroma giving it classically, on section, a structure in leaf at the origin of its name [1]. They constitute a particular entity in breast pathology: they represent less than 1% of all breast tumors and 2% to 3% of fibro-epithelial neoplasms and are characterized by a greater frequency of recurrences and a sometimes malignant evolution, on a sarcomatous mode, There is no consensus concerning the criteria for distinguishing between the different forms of PD. Moreover, the correlation between its histological criteria and the clinical behavior of the tumor remains poor. This difficult predictability generates great confusion in therapeutic protocols. Since 1981, the WHO has distinguished three categories of phyllodes tumors of the breast: grade I, grade II, and grade III. The latter considers the term "Phyllodes tumors" to be the most appropriate nomenclature.

MATERIALS AND METHODS

This is a retrospective study about a series of 20 cases, which is spread over a period of 10 years, from January 1, 2008, to December 31, 2017, from the records of patients treated for phyllodes tumors of the breast at the level of the Gynecology-Obstetrics Department at the Moulay Ismail military hospital in Meknes. The collection of data was carried out with respect for the anonymity of the patients and the confidentiality of their information. The aim of our study is to determine the epidemiological, clinical, paraclinical, therapeutic, and prognostic characteristics of breast PD and to discuss the results with regard to data from the literature.

This study includes patients with a histological diagnosis of a benign or malignant phyllodes tumor and

excludes patients with another histological type of breast tumor.

RESULTS

Twenty cases of phyllodes tumors were diagnosed over a period of 10 years, representing a frequency of 1% of breast tumors treated at the service level.

Most of our patients were young, the average age of the patients was 32 years old with extremes of 18 and 38 years old, the majority of our patients were multiparous 80%, as for the history 35% of the cases were followed for benign breast disease.

The circumstances of the discovery of the phyllodes tumors in our patients were clinical, dominated by the increase in the volume of the breast, we noted on inspection: - A modification of the contours of the breast in 20 women (100% of the cases). - Breast asymmetry in 20 women (100% of cases). - Inflammatory signs in 4 women (20% cases). - Skin ulceration in 2 women (10%). Palpation allowed us to determine the characteristics of the tumors: - The number of palpated nodules varies from one woman to another, 60% of women presented two nodules with polylobed contours, and the TPs were located in the breast right in 13 women and left in 7 women. The QSE of the breast was the seat of 60% of the PTs. The average size of the tumors was 6cm, with extremes of 4 to 10 cm. The mammographic aspect was typical with polylobed and dense masses, on the other hand, the breast ultrasound showed polylobed and hyperechoic tissue masses. Confirmation of the diagnosis was histological, after a micro biopsy revealing 85% of TPs grade I, 5 % of grade II PTs, and 10% of grade III PTs. The extension assessment was carried out in two patients who had had phyllodes sarcoma, in order to assess the locoregional extension and to search for metastases, it included: - an X-ray of the thorax face - Abdominal ultrasound - Abdomino-pelvic computed tomography - Bone scintigraphy, no metastasis was objectified. Surgical management was based on clinical characteristics and histological classification of tumors. 80% of the patients benefited from a large lumpectomy and 10% of the patients benefited from a total mastectomy only one patient had as an associated procedure an axillary dissection in front of a 5cm adenopathy whose anatomopathological examination did not reveal tumor invasion. The histological study carried out on the excision pieces confirmed the preoperative diagnosis. Two patients with grade III phyllodes tumors received adjuvant treatment with external radiotherapy. After a decline of 1 to 5 years, recurrences were observed in two patients, in whom the initial histological grade was grade II and the grade of recurrence was grade III, the time between recurrences and surgery was respectively 2 to 3 years, revision surgery was proposed to the patients.

DISCUSSION

Phyllodes tumor is rare, its frequency compared to other breast tumors is estimated between 0.09% [2] and 2.3% [3] depending on the series. It accounts for 2% to 3% of fibroepithelial neoplasms.

The phyllodes tumor mainly affects women, it is exceptional in men. It can occur at any age, this varies according to the series, 9 years old – 92 years old [4] with a peak incidence in the fourth decade, ten to twenty years later than fibroadenomas.

1- Diagnosis

The diagnosis for phyllodes tumors is based on the clinic, radiology, and anatomopathological examination; the phyllodes tumor can take several appearances, from the small nodule of a few centimeters to the voluminous masses taking all the breast [5, 6]. Phyllodes tumor typically appears as a very large mass with breast asymmetry. According to the study by Gerges Attia Demian, large tumors can lead to skin ischemia responsible for ulcerations [7].

The tumor mass appears as a palpable breast nodule of variable size. Most often, the phyllodes tumor takes the appearance of an ovoid mass, polylobed, bumpy and mobile with respect to the superficial and deep plan [2, 6, 7], with regular contours, well defined and of heterogeneous consistency [8]. This tumor is usually painless; however, masses of painful TP have been described in the series of Ben hassouna [3], where the pain is present in 14-42% of cases.

The phyllodes tumor is non-lymphophilic, its metastatic spread is mainly via the hematogenous route, which explains the absence of palpable lymph nodes in the majority of patients. However, 10-15% of patients will develop axillary lymphadenopathy, which most often results from infection-reactive hyperplasia of a necrotic tumor rather than metastasis [5].

1-2- Imaging

1-2-1 - Mammography

The phyllodes tumor produces an oval, polylobed opacity with a regular contour and is well limited with a repressed skin without invasion or stellar extension [9, 10]. The irregularity of the contours is a predictive element of malignancy, according to the Ben Hassouna study [3] scope on 106 TP.

1-2-2 - Ultrasound

We typically find a hypoechoic, oval, polylobed image, sometimes with areas of customization; there are no arguments pointing towards a malignant appearance, but a tissue lesion should prompt a microbiopsy [11, 12].

1-2-3- Anatomopathology

Macroscopic: The size of the tumor is variable up to 40 cm according to the Matar study [8]. These are well- circumscribed, multinodular, pseudo-encapsulated, round or oval tumors with bumpy outlines and firm consistency [8, 13], and traversed by slits that widen forming cavities with polypoid vegetations achieving the appearance of a bunch of grapes [14]. If the tumor is large in size, it is possible to encounter areas of necrosis, cystic or hemorrhagic degeneration.

Microscopically: More or less circumscribed tumor presenting a polylobed structure and made up of connective tissue and epithelial elements similar to those of a fibroadenoma. But characterized by greater connective tissue cellularity. There may also be myxoid, adipose and chondroid foci. It is usually a large tumor, but size alone is not a diagnostic criterion.

2- Treatment

Surgical treatment is the treatment of choice for phyllodes tumors of the breast and aims to resect the entire tumor with healthy excision margins, but adjuvant treatments are of little interest. Several techniques are proposed and which can be conservative surgeries or radical surgeries, it depends essentially on the histological grade of the tumors.

The surgical resection of the phyllodes tumor can be done according to several methods, the surgeon has a choice between a conservative treatment with or without angioplasty, or a radical treatment. As for lymph node dissection, palpable axillary adenopathies in malignant phyllodes tumors are, in the majority of cases, reactive, because the tumor dissemination is essentially hematogenous (Belkacemi) [15]. However, according to several authors, there is no indication for axillary lymph node dissection [16], regardless of the surgical technique chosen, due to the low risk of lymphatic invasion of less than 10% [5].

3- Prognosis

In the literature, the recurrence rate varies between 0 – 59% [1]. It is low for benign tumors (6-10%) and potentially high in borderline and malignant tumors (30-40%) [3]. Local recurrences appear in the first years after surgery, with an average interval of 33 months for benign TPS and 22 months for malignant TPS [13]. Histologically, these recurrences resemble the original tumor, but sometimes they can recur in a more aggressive form [5, 13].

Metastases have been observed in 3 to 25% of cases [1]. They occur two to five years after diagnosis [2]. They are most often found in cases of borderline or malignant phyllodes tumors, and rarely in benign tumors [17]. Metastases are most often located in the lungs (70%), bone (30%), and more rarely cerebral, abdominal and pelvic [18]. Lymph node involvement remains exceptional, which is why axillary dissection is not routinely recommended even in the case of grade 3 phyllodes tumor [19]. Metastatic phyllodes tumors have a very poor prognosis, and long-term survival has not been reported [5].

The average survival rate is around 90% at 5 years. The literature has shown that the 10-year survival rate was 91% for benign TPS, and 42% for malignant TPS [13]. The long-term survival of patients with TPS is determined by the existence or not of distant metastases [17].

CONCLUSION

Phyllodes tumors represent 1% of primary breast tumors, they are histologically dual component tumors: epithelial and conjunctiva, similar to breast adenofibroma. They mainly affect young women, in periods of genital activity. They are classified by the WHO in 3 grades: grade I, grade II, and grade III which corresponds to the malignant form of phyllodes tumors and are also called osteosarcoma phyllodes. Clinically and radiologically suspected in front of a polylobed nodule of variable size ranging from a few centimeters to large masses, and confirmed by an anatomopathological study of the surgical specimen. The treatment of phyllodes tumors is essentially surgical, based on a wide resection with healthy margins, as for lymph node dissection, it is not carried out, to the fact that the metastatic spread of these tumors is mainly via the hematogenous route. Adjuvant treatments are of little benefit and have shown no impact on patient survival. Local recurrences are generally observed in the first 2 years following surgery, close clinical and radiological monitoring every 6 months is necessary. As for metastases, their occurrence depends on histoprognostic factors.

DECLARATION OF COMPETING INTEREST

The author declares that he has no conflict of interest.

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