CLINICAL CASE

PECULIARITIES OF DIAGNOSIS IN THE PHYLLODES TUMOR

O. Andronic¹, D. Ion¹², Izabela Marin¹, Georgiana Radu¹, D.N. Păduraru¹²
¹The University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania
²General Surgery and Emergency Clinic III – The University Emergency Hospital of Bucharest, Romania

Abstract

Phyllodes tumor (PT) is an uncommon and distinct category of breast cancer, being a particular form of intracanalicular fibroadenoma. A definitive diagnosis is difficult to make just based on imaging investigations and fine needle biopsy; also PTs are frequently misinterpreted as breast fibroadenomas. In the case of a 26-year old woman with a suspected PT (based on clinical investigation) which was first diagnosed as a fibroadenoma using ultrasonography and preoperative biopsy, further investigation was needed. A limited resection was performed and the postoperative histopathology confirmed the diagnosis as PT.

Key words: Phyllodes tumor, fibroadenoma, breast cancer

Introduction

Breast oncologic pathology represents a real challenge in terms of correct diagnosis in its early stages, in order to establish as quick as possible an optimal therapeutic management. Breast cancer represents the most frequent incriminated oncologic pathology which affects women (29% of all the cancer diagnosed cases in women and 13% of all diagnosed cancers [1]).

Phyllodes tumors (PT) represent a special category of breast cancer, it being a particular form of intracanalicular fibroadenoma with a bitissular structure: epithelial and connective [2]. Because of the foil-like aspect it is also called Phyllodes tumor, the name originating from Greek, “phyllo”=leaf. A microscopic evaluation divides PT into three categories: benign, borderline and malignant [3], the last of the three having a 15-30% chance of occurrence[4]. In their least aggressive form, PTs have a behavior similar to fibroadenomas, but present a high risk of relapse after a resection with insufficiently wide borders. On the other hand at the other end of the spectrum we have the malignant PT showing sarcomatous degeneration [5].

PT incidences are low, under 0.25 in 100000 cases, and represent under 2% of all breast cancers in women [6-9].

Risk factors incriminated in the incurrence of PT are similar to all breast cancer masses, the most important being the feminine sex[9]. The maximum occurrence appears to be at around the age of 45 [10], the masses arising either on a healthy breast or on a pre-existent mass having different characteristics [11,12].

Clinical exam highlights in most cases an unique tumor[13], oval-shaped, well delimited, having various dimensions that can reach 50 cm [14,15]. Palpating it, the tumor can be usually described as a multilobed mass, with areas of variable consistency, non-adherent to the surrounding plans [16]. Because of the stretched...
skin overlying and the irrigation disorders, voluminous tumors may develop a shiny, tense tegument, with a pale or hyperemic color and venous dilatation expansion [17]. The most frequent location of PT is in the superior-extern dial[18]. Although the axillary adenopathies can be probed in more than 20% of the cases, during the clinical examination, their metastatic implication is usually rare [19].

No investigation technique based on imaging examination can be used to establish a certainty diagnosis, the differences between PT and fibroadenoma being most of the times too hard to see. Although, we must not forget of the ultrasonography and the mamography which have an important role in the orientation of the preoperative diagnosis in order to have a correct management of the case [20]. The typical mamographic aspect of a PT is a cancerous mass with multiple lobes and well delimited.

Thin needle aspiration provide a high rate of false negative results and has a low accuracy for the diagnosis of PT [21]. Also, macrobiopsy is as inefficient, it having a 30% false positive rate [21].

For breast fibroadenoma it is preferable to use a conservatory management, with clinical surveillance. On the other hand, in case of PT, taking into account the malignancy risk along with the recurrence risk, a segmentary or total resection must be performed, with or without limfadenectomy according to the tumor’s staging. Due to these reasons it is very important to differentiate between PT and fibroadenoma or any other kind of tumors with malignant character or potential ones [23-25].

Case report

To further study the subject, let us take into account the case of A.M., a 26 year old patient, who presented herself at no. III Clinic of Surgery of Emergency Teaching Hospital Bucharest, due to the occurrence of a cancerous mass in the left breast which had been evolving for almost 6 months(Figure 1). Her personal history did not reveal any other significant elements.

The clinical exam highlighted a left breast tumor about 8 cm diameter, movable on the surrounding plans, painless, well defined, with an overlying tegument having significant venous expansions(Figure 2 and 3). The ganglionic exam did not reveal palpable lymph nodes.

Breast echographic exam suggested benign characteristics, therefore the ultrasonographic diagnosis was hyperecogenous tumor formation with perilesional vascularity, approximate dimensions 80/65/40 mm, with benign characters - fibroadenoma.

Because the clinical examination indicated formations oriented towards a Philloides tumor, fine needle puncture biopsy had been ordered as a first step in pursuing the case. The
histopathological result of the biopsy fragment was breast fibroadenoma.

Following the results of ultrasonography and biopsy, given the large size of the tumor, it was decided that a scheduled surgery for a limited mammary resection is the correct therapeutic procedure. Further along, an intraoperative tumor formation was found pseudo-encapsulated, noninvasive in the adjacent tissue, with a diameter of around 6 cm. The resection of the tumor formation was ordered and was well accomplished, with oncological safety edges of 1 cm, after which the piece was sent to anatomicopathological examination (Figure 3 and 4). Histopathological examination confirmed the initial suspicion of Phyllodes tumor of benign nature.

The postoperative evolution was favorable, the patient was discharged the 3rd postoperative day, having been legally considered surgically cured.

**Discussions**

Clinical studies have revealed the difficulty of the differential diagnosis between PT and breast fibroadenoma[26-28]. In this case, the clinical examination suggested a PT diagnosis, which was later infirmed by the ultrasonography and thin needle biopsy. Initial suspicions were confirmed postoperatory, the final diagnosis being PT. Due to the high rate of false negative results of the puncture, for positive diagnosis of PT, excisional biopsy of any breast tumor is required every time it becomes symptomatic or its volume increases rapidly.

Because of these difficulties, a thorough clinical examination appears to be of great
importance, mostly because it may direct the management to surgical or conservative approach. Phyllodes sarcoma is an anatomopathological form whith an extremely aggressive evolution[29,30], and therefore it is essential to take into consideration surgical management even if the PT is benign because of its real risk of malignancy [4].

Although the maximum incidence of PT is between 35-55 years[9], this diagnosis should not lose sight of young patients that present a high degree of suspicion after a clinical examination.

PT surgical resection should be performed with wider margin of safety of 1cm; this limit being larger than the one for breast carcinoma. On the other hand, a misinterpretation of these PTs as breast fibroadenomas, frequently leads to excision with unfit margins of safety, and a high rate of local recurrence. Evidence shows current rate of local recurrence after local resection with negative margins, 24% for borderline PT and 20% for malignant PT. Adjuvant radiation therapy added to the resection with negative margins improves local control of the disease [31]. Given the low rate of metastasis in axillary lymph nodes, even for malignant TP, current studies indicate that axillary lymphadenectomy is unnecessary.

Conclusions

Phyllodes tumor, although a rare type of breast neoplasia remains difficult to diagnose by current means of imaging and even biopsy. Clinical examination should be the start procedure, guiding the clinician towards a correct diagnosis, which can then be later confirmed pre or post operatively. Excluding this type of tumor from the differential diagnosis is essential in order to ensure a favorable long term evolution of the patient.

References


