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Breast Stromal Periductal Sarcoma: A Case Report

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Case Report

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Abstract: Periductal stromal sarcoma is a rare lesion. It was considered to be a variant of phyllode tumor whereas they are morphologically different. Our patient was a 39 years old, with no previous history, who presented a nodular formation at the level of the inferior-internal quadrant of the right breast operated in 2015 with the realization of a nodule excision. The histological examination carried out was in favor of the diagnosis of a periductal stromal sarcoma with tumoral surgical excision limits. 2 years later, she presented a recurrence at the level of the tumor scar. A bilateral digital mammography was performed which showed an appearance in favor of a tumor recurrence of 63 mm of major axis at the level of the inferior-internal quadrant of the right breast. She was given a biopsy excision communicated to our structure. The diagnosis of the recurrence of a periuctal stromal sarcoma has been retained. The number of studies available on periductal stromal sarcoma (SPP/PSS) is currently limited and a therapeutic strategy for the PSS has not yet been determined. The histological diagnosis of PSS is based on the criteria established by the AFIP, and surgery with significant margins is the cornerstone of treatment.
Keywords: Stromal, Sarcoma, Periductal, Recurrence, Surgey.

INTRODUCTION

Background

Periductal stromal sarcoma is a rare lesion. It was considered to be a variant of phyllode tumor whereas they are morphologically different. About twenty cases have been described in the literature with an average age of 55 years [1]. The evolution towards malignancy remains the concern of the clinicians hence the necessity to resort to the surgery.

CASE PRESENTATION

Our patient was a 39 years old, with no previous history, who presented a nodular formation at the level of the inferior-internal quadrant of the right breast operated in 2015 with the realization of a nodule excision. The histological examination carried out was in favor of the diagnosis of a peruductal stromal sarcoma with tumoral surgical excision limits. 2 years later, she presented a recurrence at the level of the tumor scar. A bilateral digital mammography was performed which showed an appearance in favor of a tumor recurrence of 63 mm of major axis at the level of the inferior-internal quadrant of the right breast. She was given a biopsy excision communicated to our structure.

At our level, we have received 8 fragments measuring between 0.1 and 0.2cm of the main axis. Microscopic analysis revealed tumor proliferation with little differentiation to moderate cellularity, consisting of ovoid, round, and fusiform cells with imprecise cytoplasmic limits (Figure-2). The cytoplasm is not very abundant and eosinophilic, the nuclei are anisocaryotic and hyperchromatic sometimes nucleolated (Figure-3). The mitosis figures are estimated at 4 mitoses per 10 fields (Gx40).

The tumor cells are organized in diffuse plaques within a small stroma and vascular and are arranged around dilated mammary channels (Figure-1). The absence of tumor necrosis is noted. The diagnosis of the recurrence of a periuctal stromal sarcoma has been retained.

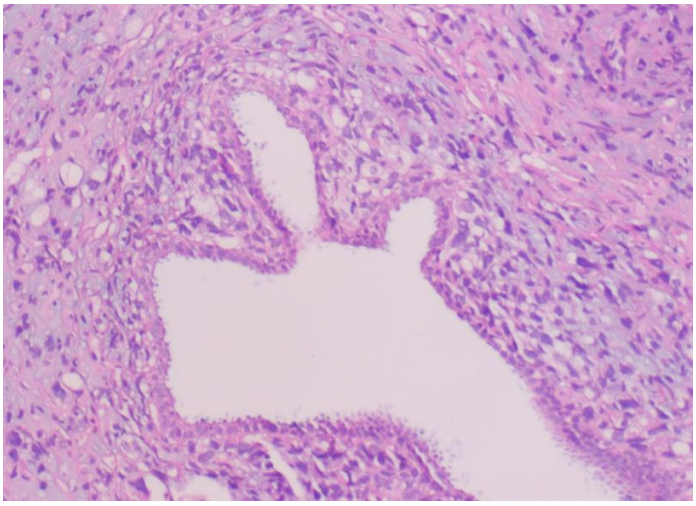

Fig-1: histological image showing the disposition of tumor cells around dilated ducts Gx10

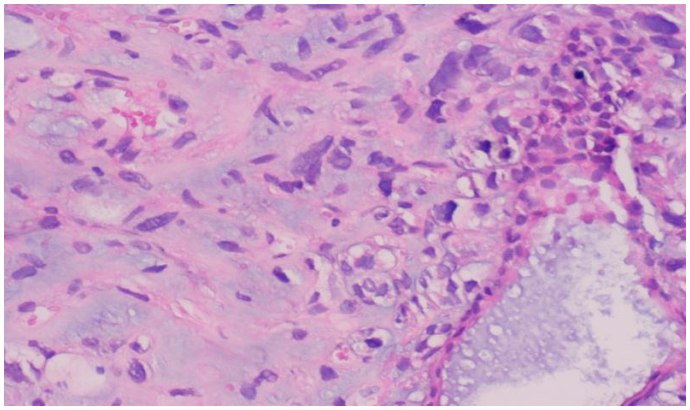

Fig-2: Histological image showing poorly differentiated tumor growth with moderate cellularity, ovoid, round, fusiform cells with imprecise cytoplasmic boundaries Gx40

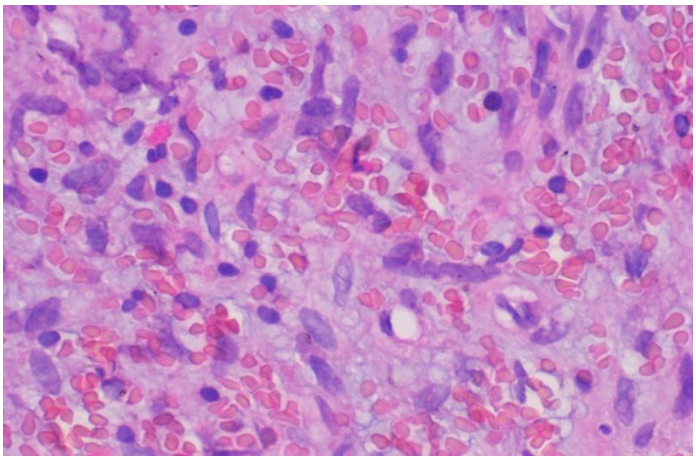

Fig-3: Histological image showing a scanty and eosinophilic cytoplasm with anisokaryotic and hyperchromatic nuclei sometimes nucleolated Gx40

DISCUSSION

Stromal perductal sarcoma (SPS or SSP) was previously considered a variant of cystosarcoma with adipose metaplasia (2); currently it is recognized as a separate entity and was classified by the World Health Organization in Lyon since the year 2002 [2].

It is seen mainly in women in pre and post menopause with an average age of 55.3 years [1] with a case described in the child in 2011. The most frequently found symptoms are those seen in other Benign and malignant mammary tumors without radiological specificity [1].

It has a tendency to recur locally when it is excised incompletely with the possibility of development of soft tissue-specific sarcomas and metastases [1]. Histologically, SPS is a biphasic breast tumor with benign ductal elements and a sarcomatousstroma devoid of tumor phyllodes architecture [3].

The histological characteristics of SPS/ PSS have been defined by the Institute of Pathology of the Armed Forces (AFIP) [1] and are: 1- proliferation with predominant stromal cells, cellularity and variable atypies surrounding opening Tubules and canals, lacking a pattern of phyllodes; 2 -presence of one or more multiple nodules separated by adipose tissue; 3- mitotic activity at stromal cells ≥3 / 10 at high magnification; 4- infiltration of the surrounding mammary glands by the fibro-adipose tissue.

Immunohistochemistry reveals that tumor cells should be positive for smooth muscle actin and CD34. They are often positive for CD117 and do not express the S-100 protein, estrogens, and progesterone receptors [1, 4, 5].

The histological classification of periductal stromal sarcoma depends on degrees of atypia and the number of mitosis, the definition of two entities: low grade and high grade [2].

SPS/PSS is a tumor of intermediate behavior, resection with significant healthy margins is generally considered sufficient and axillary clearing in this case remains optional. As far as adjuvant therapy is concerned, the literature currently available gives no benefit to radiotherapy or chemotherapy [2].

The tendency of the SPS/PSS to reproduce and progress to high grade phyllode tumors or soft tissue sarcomas, as well as the occasional occurrence of intraepithelial changes ranging from normal hyperplasia to intracanal carcinoma [1, 6, 7]. Require close clinical and radiological follow-up.

CONCLUSION

The number of studies available on periductal stromal sarcoma [SPP/PSS] is currently limited and a therapeutic strategy for the PSS has not yet been determined. The histological diagnosis of PSS is based on the criteria established by the AFIP, and surgery with significant margins is the cornerstone of treatment. The prognosis of patients with PSS remains unclear; thus, increased experience of these cases and a longer follow-up period are required to study the optimal management and clinical behavior of this neoplasm.

ABREVIATIONS

SSP/PSS: Periductal stromal sarcoma
AFIP: Institute of Pathology of the Armed Forces

ETHICS APPROVAL AND CONSENT TO PARTICIPATE:

This work has respected all the rools of medical ethics and has been elaborated by all the authors.

AVAILABILITY OF MATERIAL AND DATA

All data is available in the national institute of oncology, Rabat, Morocco.

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CONSENT TO PUBLISH

As the main author and the names of all authors I allow you to publish this article in your review.

COMPETING INTERESTS

The authors do not declare any conflict of interest.

AUTHOR'S CONTRIBUTIONS

All the authors contributed to the writing of this work.

ENDONOTES

Dear sir,
I have the honor to submitt my work intitulated "stromal periductal sarcoma" that remains a rare entity that the recurrent caracter requires a rigorous monitoring and acomplete surgical exeresis.

My work aims to focus on this type of tumor and the role of the pathologist in the diagnostic approach

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