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Breast Myofibroblastoma in a 62-Year-Old Woman: A Rare Case Report

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1. Abstract

We present a case report on the discovery of a myofibroblastoma tumor in a female patient. This type of benign tumor is very rare and the few cases found in the literature are found in the male population. We describe this case because it is important to share with the scientific community the clinical and radiological findings of this type of tumor to facilitate its identification and prompt intervention.

2. Introduction

Breast tumors are pathologies that are widely studied worldwide, even more so are those for which there is little evidence or those that represent an important finding and relevant to the scientific community, myofibroblastomas are benign very rare breast tumors [1]. The cases where they have been able to be identified are mainly in the male population [2], given their rarity they represent a challenge to identify them and intervene promptly, therefore they represent a challenge for today's medicine to identify these cases, currently the cases reported in the literature obey case reports mainly in men the female population being a particular and strange case within a pathology that is already very rare to find [3].

3. Clinical Case

The case of a 62-year-old female patient without any comorbidity or previous surgical history who consulted the oncological surgery service of the San Juan de Dios Hospital with a 2019 mammography result that reported mass in the right breast classified in BI-RADS is presented. IV, which reports mixed breast parenchyma with a mass with slightly lobulated contours of medium intensity that projects onto the upper external region of the right breast with a diameter measurement greater than 96x76x100mm with calcifications that project adjacent to the mass that concludes for a BI-RADS-4A Recommending correlation with core needle biopsy a magnetic resonance image was obtained that reported a dense heterogeneous breast with few areas of liquid density inside with a mild glandular enhancement pattern, in addition to reporting a large, oball-shaped solid mass with circumscribed margins, hypodense heterogeneous signal intensity on the T1 sequence. isointense with hypointense area in T2 sequence, hyperintense in STIR sequence with restrictive pattern, after the administration of intravenous gadolinium less than 50% in the first phase and a persistent enhancement greater than 10% in the second phase, it measures 12.5 x 8 .5 x 7 cm (AP x L x T) although it is located in the external quadrants, apparently much of its irrigation depends on the branch of the ipsilateral internal mammary artery and to a lesser extent on the branches that come from the axillary region, it corresponds a benign neoplastic lesion (Figure 1).

Trucut needle biopsy guided by breast ultrasound was requested, which reported as a benign tumor lesion compatible with breast-type myofibroblastoma negative for necrosis, suggesting incisional biopsy and/or immunohistochemistry. Subsequently, immunohistochemistry was requested, which revealed spindle-shaped cells without atypia arranged in fascicles separated by hyaline sclerotic

collagen and elongated dilated ducts with an epithelium without atypia. Diffuse expression was observed for Vimentin, CD34 and BCL2, and focal desmin with marking in the ductal epithelium for estrogen and progesterone (Figure 2).

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The patient was followed up for months where she was finally operated, she underwent a total mastectomy (Figure 3.) She required support with blood products, and was discharged 48 hours after the intervention without any complications with oral NSAID analgesia and a follow-up appointment to evaluate her condition.

Biopsy results taken during the procedure showed negative borders, the patient was followed periodically, referring to a great improvement in his quality of life after the procedure. No complications or changes occurred in the two months following the intervention (Figure 4).

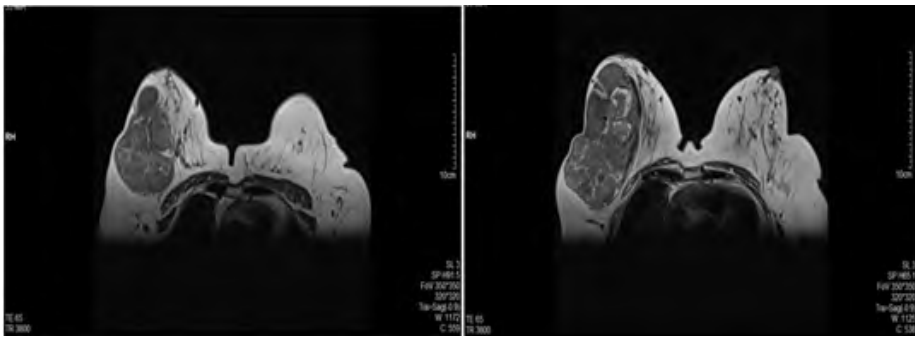

Figure 1: MRI with gadolinium contrast that reveals a solid mass-like lesion with circumscribed edges that measures 12.5 x 8.5 x 7 cm (AP x L x T).

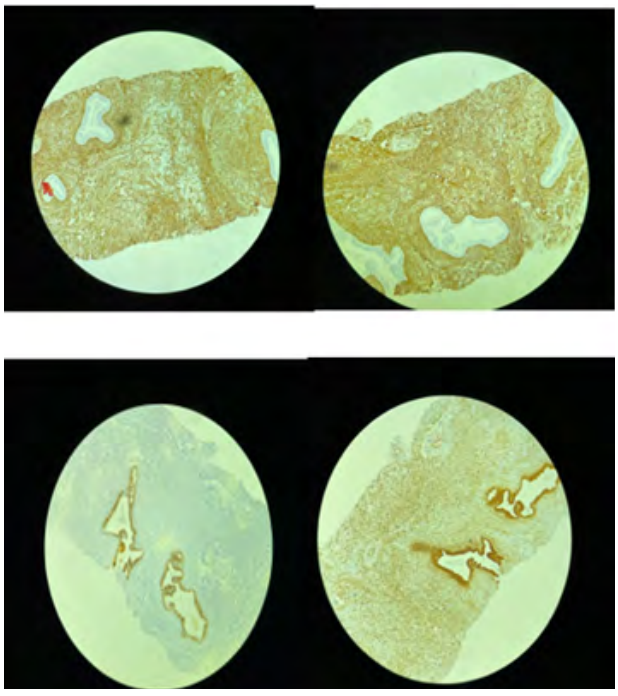

Figure 2: Immunohistochemistry study showing spindle cells without atypia arranged in fascicles separated by hyaline sclerotic collagen and dilated elongated ducts with an epithelium without atypia.

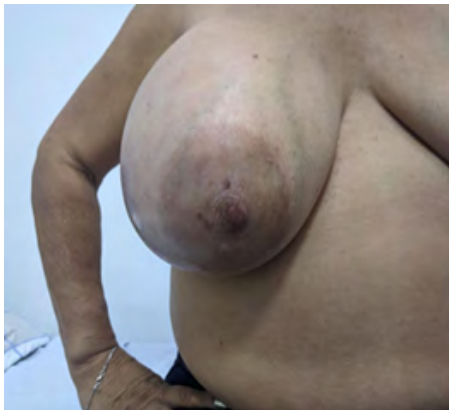

Figure 3: Mass in the right breast with regular edges of approximately 10 cm, A) Front.

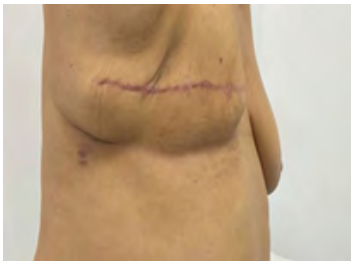

Figure 4: Image of the post-mastectomy patient showing horizontal scar and excess skin A) side

4. Discussion

Myofibroblastoma of the breast is a very rare benign tumor of mesenchymal cells which usually occurs especially in men [4]. It was described for the first time in 1987 by Wargotz in a study of 16 cases (11 men and 5 women) as a benign spindle cell tumor which is more common in men where it is described as an adipose component in the breast than in some cases [5,6]. It may present areas of differentiation that may be cartilaginous or smooth muscle, they present contours with good differentiation of fibroblasts that grow progressively, these tumors do not metastasize and present a low recurrence rate in treated patients, it is reported in the literature as "fibroma tumor" "myogenic stromal tumor" "spindle cell lipoma" and "solitary fibrous tumor"(xxx).

Currently, there are few reports on this entity in the world literature [7,8], due to the fact that its incidence is very rare, the possibility of malignancy should not be ruled out when a lesion like these occurs and despite the fact that it is a benign tumor, the complications associated with its Exaggerated growth should not be overlooked, as we mentioned in our clinical case, where despite the diagnostic imaging aids and the clinical findings, the definitive diagnosis was mediated by core needle aspiration and immunohistochemistry where the type of tumor was revealed [9-11] .

This patient who consulted for increased breast tissue in the right breast, painless on palpation with pruritus and a sensation of heaviness. With slow growth that did not present with telorrhea, no pain was identified on palpation, edema, bleeding, and ecchymosis, palpable. With finding of mass in the right breast with regular edges of approximately 10 cm; Additionally, the patient reported back pain on the side of the mass related to her weight [12,13].

Mammary myofibroblastoma, is an exceedingly uncommon neoplasm, predominantly affects the female population and is distinguished by the presence of myofibroblastic cells embedded within a heterogeneous stromal matrix. Microscopic examination reveals spindle-shaped cells characterized by ovoid nuclei, and they demonstrate positive immunohistochemical expression for specific markers such as smooth muscle actin (SMA) and desmin, thereby confirming their myofibroblastic origin [14].

Macroscopically, mammary myofibroblastomas manifest as well-defined encapsulated masses with a firm consistency, often resembling fibroadenomas or other benign breast lesions. Fortunately, this benign tumor exhibits an excellent postoperative prognosis, characterized by a low incidence of local recurrence and an absence of documented metastatic spread. The primary mode of management entails complete surgical resection, and owing to its rarity, it is imperative for healthcare practitioners to be cognizant of this oncological rarity to facilitate accurate diagnosis and appropriate treatment planning [15].

Some authors considered the possibility of classifying these tumors as solitary fibrous tumors due to the similarity in their morphological and immunohistochemical characteristics. Myofibroblastomas are positive for CD34 while myoepithelial tumors are immunoreactive for the S-100 protein, which represents a notable differentiation, therefore we can say that myofibroblastomas are differentiable from spindle-shaped tumors and from cellular components related to spindle-shaped tumours [16].

The above demonstrates the importance for the medical and scientific community of reporting these cases since despite the fact that they are benign lesions, these are very rare and should not be overlooked in our patients, the imaging studies, the physical examination, the information referred to by the patient in her consultation, the previous clinical history and background are of vital importance to guide the diagnosis [17], to date the patient enjoys improvement in her clinical condition, she reported asymptomatic and reported no recurrences in the following two months. The patient showed improvement in her quality of social and personal life after the intervention. She stated that thanks to the timely intervention in the emergency department she did not present any major complications, the patient's relatives expressed seeing her more cheerful and with vitality after the resolution of her pathology.

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