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531 - NODULAR FASCIITIS OF THE BREAST: A CASE REPORT

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Nodular fasciitis (NF) is a benign proliferative lesion of fibroblasts and myofibroblasts, first described by Kornwaler et al in 1955. It can occur anywhere in the body, but it rarely happens in the breast. The precise mechanism is not well understood, but it is believed to develop in response to injury, although a history of trauma was described in only 10% of patients. The pathogenesis of NF is also related to a molecular modification as 74%–100% of cases harbor a gene rearrangement involving Ubiquitin-specific Peptidase 6 (USP6). NF commonly affects adults between 20 and 40 years of age, in equal proportion for men and women. It typically presents as a solitary lesion, less than 2 cm in diameter within the subcutaneous tissue, with rapid growth that may be painful or tender. On imaging, NF can mimic malignant lesions, appearing in most cases as a solid mass with a nonuniform shape and speculation. NF is rarely diagnosed by fine-needle aspiration (FNA) cytology or core-needle biopsy, because usually not all of the cells are properly represented or it shows only spindle cells, without more information to confirm the diagnosis. Consequently, commonly it is required to have an excisional biopsy for histologic confirmation. Histopathologically, NF is characterized by a cellular proliferation of mitotically active myofibroblastic/fibroblastic spindle cells that express smooth muscle actin (SMA). An immunohistochemical panel is often necessary for differential diagnosis, including p63, SMA, and CD34. In cases where the diagnosis is still not defined, fluorescence in situ hybridization may be helpful to detect USP6 rearrangement. The differential diagnosis includes the spindle cell lesions, like spindle cell carcinoma and sarcoma among malignant lesions, and fibromatosis and myofibroblastoma among benign lesions. NF has a self-limiting nature and in some cases, spontaneous regression was even described. For that reason, some authors suggest a conservative management with careful observation when NF is definitively diagnosed by FNA or core-needle biopsy. For cases that need a surgical excision for diagnosis, this procedure is already diagnostic and curative. Recurrence after spontaneous resolution or surgical excision has not been reported. A 43-year-old woman visited a breast surgeon with a self-detected painless palpable mass in the left breast of 3 months, without trauma history or systemic symptoms. She had no comorbidities or family history. On examination, there was a firm 4-cm mass in the upper inner quadrant of the left breast, near the parasternal region. The mammogram revealed just bilateral benign calcifications, designated BIRADS 2. Ultrasound demonstrated a 4×4×2.7 cm hypoechoic, irregular, and spiculated mass at 10:00 near the parasternal region and no cleavage plan to pectoralis major muscle, designated as BIRADS 5. There was no atypical lymph node. An ultrasound-guided core biopsy of the suspect nodule was obtained, which showed spindle cells, without atypia. Following this indeterminate finding, the patient underwent excisional biopsy, which histopathologic concluded spindle cells, without atypia, with an immunohistochemical panel showing negative beta-catenin, negative CD34, and positive SMA, suggesting the NF diagnosis. The patient is still in observation, with no evidence of recurrence since the surgical procedure.