BREAST CARCINOMA WITH OSTEOCLAST-LIKE GIANT CELLS: A CASE REPORT

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ABSTRACT

Breast carcinoma with osteoclastic giant cells (OGCs) are uncommon. As per the WHO classification of tumors of the breast, these tumors are designated carcinoma with osteoclast-like giant cells and are categorized under invasive carcinoma of no special type. Here, we report a 69-year-old woman with a lump in her left breast. Diagnosed with a triple negative breast carcinoma with OGCs. She is still free of recurrence with an 18-month follow-up.

KEYWORDS: BREAST CARCINOMA, OSTEOCLASTIC GIANT CELLS, TUMOR METASTASIS, PROGNOSIS, ESTROGEN RECEPTOR (ER), PROGESTERONE RECEPTOR (PR), HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR 2 (HER2/NEU)

INTRODUCTION

According to INCA in 2020, breast cancer represented 29.7% of all cases of tumors in women in Brazil. Mortality in 2019 in the same public was 16.4% [1]. It is considered the main cancer in female patients. Of the various types, osteoclast-like giant cells mammary carcinoma (OGC) is uncommon and described in less than 2% among cases of breast cancer patients [2]. According to the WHO classification of breast tumors, these are called osteoclast-like giant cell carcinomas and are classified as atypical invasive carcinoma [3]. Leurox 1931 and Duboucher et al 1933 first described this subtype of breast carcinoma in the French medical literature. There are few cases in the literature and its importance is due to the assessment of tumorogenesis and prognostic evaluation of affected patients. Below we report a case of an elderly woman with OGC accompanied by invasive ductal carcinoma and papillary carcinoma.

CASE REPORT

Female patient, 69 years old, white, admitted to the oncology service with a painless nodule in the left breast. On physical examination, she showed breast asymmetry with retraction and deformation of the affected breast with a palpable retroareolar lesion. Mammography showed two irregular retroareolar nodules in the left breast, with retraction of Cooper's ligaments, thickening and retraction of the areola and nipple, measuring 2.5 cm each. Ultrasonographic study documented two hypoechoic, rounded, well-circumscribed, retroareolar masses measuring 2.0 cm each, in its largest diameter. Investigation showed no evidence of distant metastases. The patient underwent left unilateral mastectomy and sentinel lymph node biopsy.

The resection of the sample showed that the tumors had dimensions of 3.5 cm (as a whole) in their largest diameter. In the tissue, a 10% buffered neutral formalin fixative was used and embedded in paraffin. Hematoxylin-eosin stained sections revealed a tumor composed of an intracystic papillary carcinoma with a prominent osteoclastic giant cell component. The stroma revealed hemorrhage and hemosiderin deposition. Sentinel lymph node in the left axilla was free from malignancy (Pn0). Tumor cells stained negative for estrogen receptor, progesterone receptor and Her/neu2. Ki-67 positive by approximately 30%. After surgery, the patient received taxane-based chemotherapy for 4 cycles and post-mastectomy radiotherapy.

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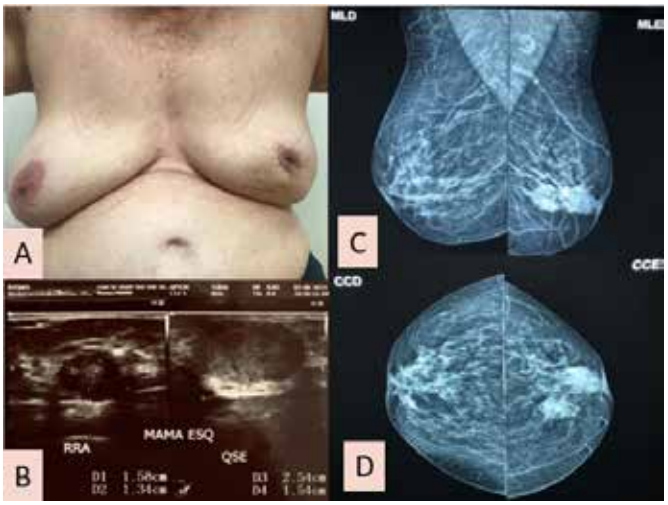
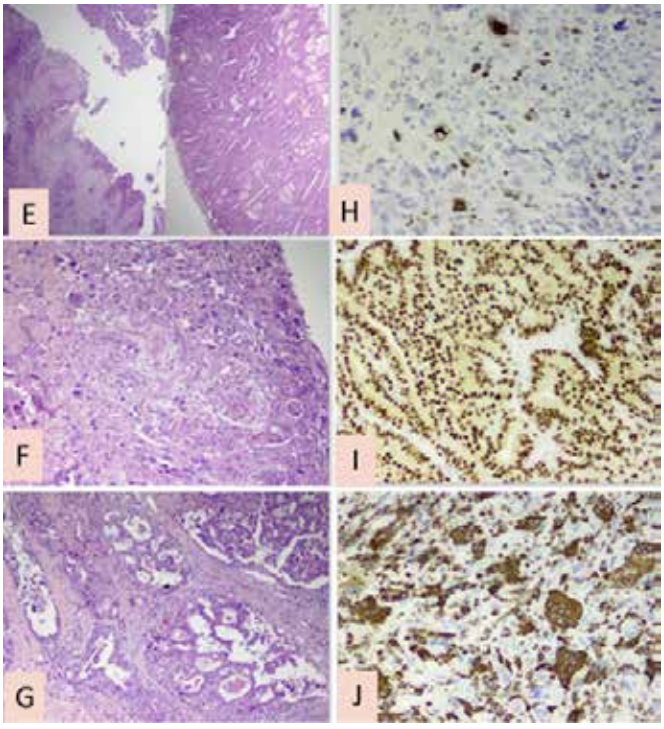


(A. Patient with asymmetry and retraction; B. Ultrasound image; C. Mid lateral oblique mammography; D. Craniocaudal mammography)



(E and F. Cystic retroareolar lesion; G. Scarce carcinoma-in-situ; H. ki67; I. Estrogen receptor; J. CD68)

DISCUSSION AND CONCLUSION

Invasive ductal (or infiltrating) carcinoma is the most common type of breast cancer, accounting for 80% of cases. Papillary carcinoma, among others, is less frequent and is generally treated as standard invasive ductal carcinoma [4].

Breast carcinoma with osteoclastic giant cells (OGC) is characterized by the presence of OGC together with malignant epithelial cells. They often appear with atypical hyperchromatic nuclei and occasionally with small nucleoli and fine chromatin structure. Mitotic images are typically rare. The mechanism of OGC formation is still unknown and is at least partially attributed to tumor-induced angiogenesis and inflammatory cytokines such as VEGF and MMP12 [5]. So far, the influence of OGCs on the patient's prognosis is still controversial. In the case described in this elderly patient, with triple negative breast carcinomas, with OGCs, she was free from recurrence during the 18-month follow-up until then. As there were no comorbidities, it was not necessary to introduce anthracycline-based chemotherapy. In the literature, there are more than 200 registered cases, but more studies are needed to define the exact pathogenesis of OGCs and determine their role in tumor formation [5].

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