

CASE REPORT

CHONDRO-OSTEOSARCOMATOUS MATRIX-PRODUCING METAPLASTIC BREAST CARCINOMA

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ABSTRACT

Metaplastic carcinoma is a heterogeneous group of invasive breast carcinomas (IMC) characterized by the differentiation of neoplastic epithelium to squamous cells and/or mesenchymal-like elements. It presents clinically as a palpable nodule and as a mass lesion on mammography and ultrasound. The present report evidenced a 50-year-old woman with a clinically hardened, irregular, ill-defined nodule measuring 2 cm, in the UQS and with a free axilla. Mammography and ultrasonography showed BI-RADS 5. After anatomopathological and immunohistochemical study, the diagnosis of chondro-osteosarcomatous matrix-producing metaplastic invasive breast carcinoma was made. It is noteworthy that some metaplastic carcinomas may have components that resemble true soft tissue sarcomas.

KEYWORDS: BREAST CANCER; INVASIVE METAPLASTIC CARCINOMA; MESENCHYMAL

INTRODUCTION

Metaplastic carcinoma is a heterogeneous group of invasive breast carcinomas (IMC) characterized by the differentiation of neoplastic epithelium to squamous cells and/or mesenchymal-like elements, including, but not restricted to, spindle, chondroid and bone cells. It presents clinically as a palpable nodule and as a mass lesion on mammography and ultrasound. Calcifications are uncommon, but when present they are often associated with ductal carcinoma in situ and/or bone differentiation¹.

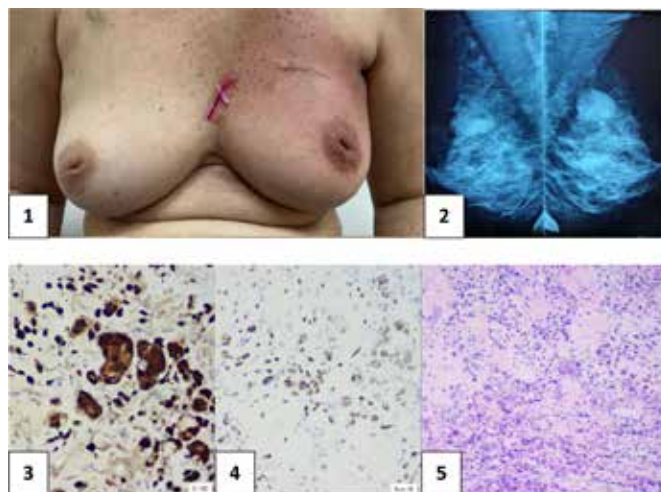
Mesenchymal components may be differentiated with minimal atypia or with typically malignant characteristics that resemble the patterns found in true soft tissue sarcomas².

Immunohistochemical analysis reveals the expression of epithelial markers, usually high molecular weight cytokeratins.

CASE REPORT

F.B.C.D. female, 50 years old, presented a hardened, irregular, ill-defined nodule measuring 2 cm in the UQS of the left breast and with a free axilla. Mammography and ultrasound showed BI-RADS 5. Core biopsy indicated CDI G2. Estrogen receptor (ER) and progesterone receptor (PR) negative tumor, in addition to HER-2 negative, with Ki-67 of 80%. Pre-chemotherapy labeling with iodine seed

was performed. The patient underwent neoadjuvant chemotherapy and subsequent quadrantectomy with sentinel lymph node. After anatomopathological and immunohistochemical study, the diagnosis of chondro-osteosarcomatous matrix-producing metaplastic invasive breast carcinoma was made. The chemotherapy regimen used was dose-dense AC followed by weekly taxol for 12 cycles. When performing PET-CT, the patient did not present foci of metastasis.



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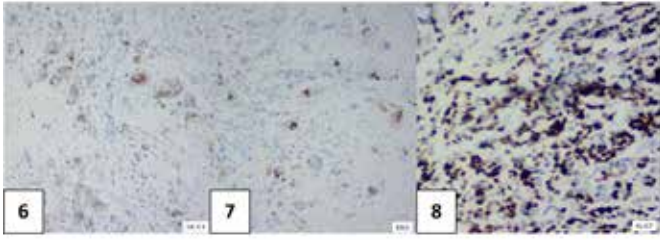


Figure 1: Postoperative period; Figure 2: Mammographic appearance; Figure 3: S-100; Figure 4: Sox-10; Figure 5: Histological aspect; Figure 6: CK-5.6; Figure 7: EMA; Figure 8: Ki-67.

DISCUSSION

Metaplastic carcinoma is a rare triple negative carcinoma of the breast that presents transformation of part or all of its carcinomatous glandular component into a non-glandular or metaplastic component¹.

These aggressive tumors are composed of a mixture of differentiated mesenchymal components, including chondroid, bony, rhabdomyoid and rarely neuroglial elements. This type of metaplastic carcinoma is further subclassified by the WHO into 1 of 3 categories: carcinoma with chondroid differentiation, carcinoma with bone differentiation, and carcinoma with other types of mesenchymal differentiation. These tumors are often large at the time of diagnosis².

The differential diagnosis is broad. However, identification of an atypical epithelial or carcinomatous component and immunohistochemical evidence of carcinomatous differentiation are extremely helpful in the differential diagnosis. Recent genetic and molecular studies are clarifying the crucial determinants of metaplastic carcinomas with chondroid and bone differentiation. Future investigations aimed at understanding the relationship between the phenotypic diversity of metaplastic carcinomas, patterns of gene and protein expression and their relationship with biological behavior will be important for the development of specific and effective therapies².

CONCLUSION

Based on the above, it appears that invasive breast carcinoma can present itself in different ways. In the present case, the carcinoma is of the metaplastic type and the neoplastic epithelium has differentiated into chondroid and bone cells, with production of chondro-osteosarcomatous matrix. It is noteworthy that some metaplastic carcinomas may have components that resemble true soft tissue sarcomas.

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