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Review Article

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BREAST CARCINOSARCOMA: ABOUT A CASE AND REVIEW OF THE LITERATURE

Dr. LAARAJ Soukaina*, Dr. MOHAMMADINE Chaimae, Pr. GUELZIM Khalid, Pr. BABAHABIB Abdellah, Pr. ELHASSANI Mehdi, Pr. KOUACH Jaouad

Department of Gynecology-Obstetrics Mohamed V Military Hospital - Rabat – Morocco.

***Corresponding Author: Dr. LAARAJ Soukaina**

Department of Gynecology-Obstetrics Mohamed V Military Hospital - Rabat – Morocco.

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ABSTRACT

Carcinosarcoma is one of metaplastic carcinomas of the breast, composed of two distinct malignant cell lineages: classical carcinomatous and sarcomatoid with spindle cells of mesenchymal origin, with no apparent transition zone between the two elements. This is a rare form, representing less than 0.1% of all malignant breast tumors. The diagnosis is confirmed by immunohistochemical study of the surgical specimen. Treatment is based on surgery and adjuvant radiotherapy. The evolution is dominated by local recurrence and visceral metastases.

KEY WORDS: Carcinosarcoma – dual component – metaplastic carcinoma.

INTRODUCTION

Carcinosarcoma is a rare biphasic malignant tumour, defined by the coexistence of two infiltrating carcinomatous and sarcomatoid components classified in the group of metaplastic carcinomas. It is a rare tumor and therefore often overlooked.

We report an observation in order to expose the nosological, diagnostic and therapeutic difficulties of this rare entity.

OBSERVATION

This is Mrs. C. A., 28 years old, married and mother of 3 children, with no significant pathological history, no family history of breast cancer.

The history of the disease dates back to September 2021 by the self-examination of a left breast nodule having gradually increased in volume without nipple discharge or inflammatory signs.

The initial clinical examination of the patient objectified on palpation of the left breast a nodule at the level of the upper outer quadrant (QSE) hard, poorly limited, with irregular surface measuring 5cm * 4cm in diameter without cutaneous abnormality, nor inflammatory signs in gaze or anomaly of the nipple-areolar plaque; Palpation of the left axillary hollow revealed the presence of lymphadenopathy measuring 1 cm with a suspicious appearance. Absence of palpable nodule in the right breast and the rest of the lymph node areas were free.

The mammography objectified the presence at the level of the left QSE of an opacity of fuzzy contours measuring 43*32 mm described on the ultrasound as a heterogeneous hypoechoic lesion, of microlobulated contours measuring 43*26 mm classified BIRADs 4, with axillary lymphadenopathy the most voluminous left hypoechoic images measure 8 mm on the short axis.

A breast MRI was requested showing the presence of a left breast mass at the level of the QSE classified BIRADs 5 measuring 33*45*46 mm with multiple suspicious ipsilateral axillary adenopathies, the largest measuring 14 mm. With 3 small right mammary masses corresponding to adenofibromas classified BIRADs 3.

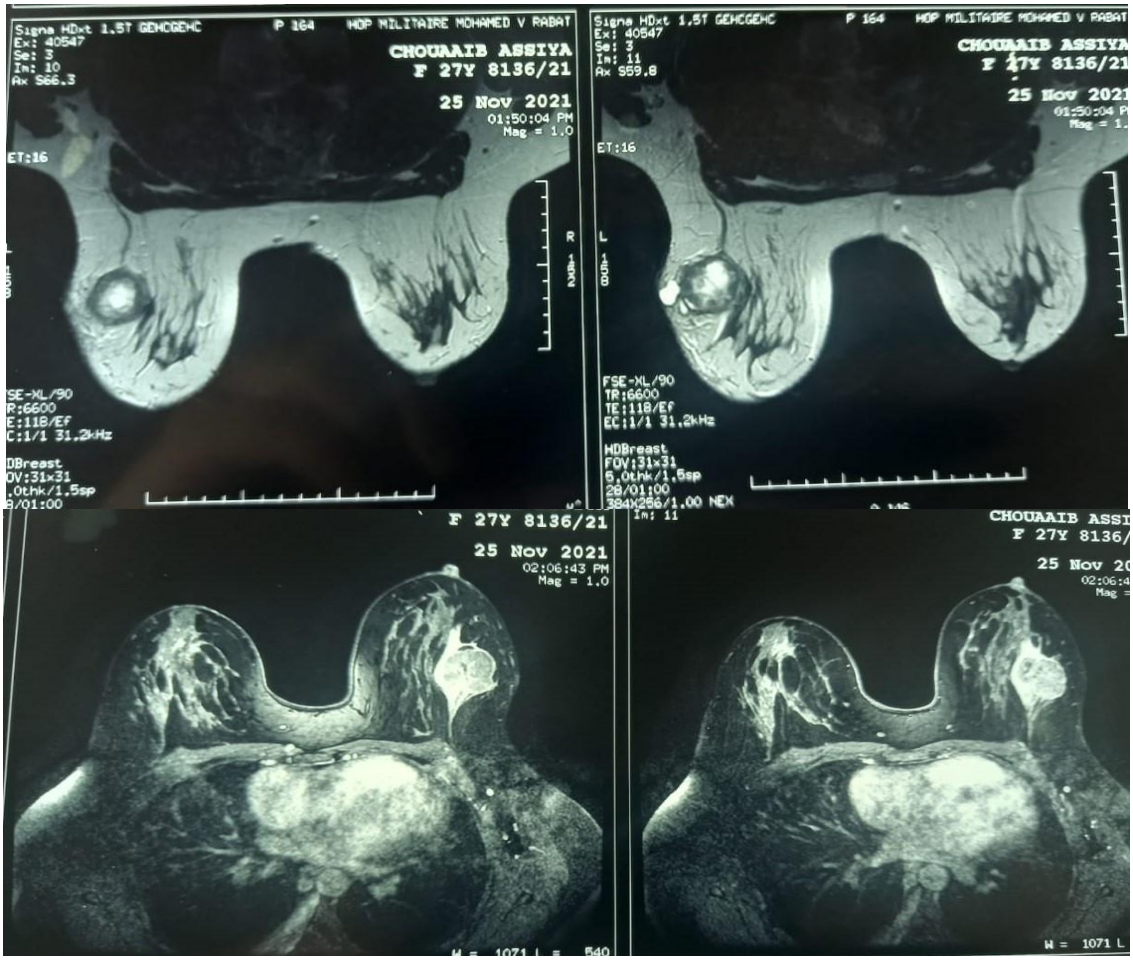

Figure: MRI aspect of a left breast mass at the level of the QSE at 5.5 cm from the nipple, bilobed hyposignal T1, intermediate signal T2 measuring 33* 45*46 mm.

A microbiopsy with tri-cut was made and the histological examination showed an undifferentiated malignant tumoral proliferation made up of cells with abundant eosinophilic cytoplasm and increased nuclei of anisokaryotic, hyperchromatic size, with sometimes bi and polylobed nuclei, mitoses are very numerous, the stroma is fibro-inflammatory. The immunohistochemical study carried out showed:

- Focal positivity of tumor cells by CKAE1/AE3.
- Heterogeneous positivity of tumor cells by EMA.
- P63: positive nuclear labeling of tumor cells.
- Ki67 at 75%, hormone receptor negative, herceptest negative (score 0+).

An extension assessment was carried out:

- PET-scan showing heterogeneous hepatic uptake of segment VII supplemented by hepatic MRI showing homogeneous hepato-splenomegaly.
- Brain MRI not showing any suspicious lesion.

Faced with the triple negative immunohistochemical profile, the patient underwent 8 courses of neoadjuvant chemotherapy after identification of the tumor by ultra-clip.

The clinical and radiological reassessment after chemotherapy showed a total regression of the disease, then the patient is readressed in our training for a conservative surgical treatment: lumpectomy after ultrasound-guided identification of the clip by harpoon and axillary dissection.

The histological study of the specimen did not show any residual tumor, 0N+ / 10 N (TA, NA) according to the sataloff classification.

The action to be taken was to perform radiotherapy on the chest wall and on the axillary hollow, there was no indication for adjuvant chemotherapy.

DISCUSSION

Breast carcinosarcoma is a rare tumour, which represents less than 1% of invasive breast cancers.[1] It corresponds to tumor proliferation that associates carcinomatous foci with areas of mesenchymal differentiation.[2] According to some authors, carcinosarcoma is a biphasic malignant tumor that includes a malignant mesenchymal component (< 50% of the tumor), this component is contiguous to another carcinoma, of the ductal or squamous cell type.[3] Other authors have used this term as a synonym of sarcomatoid carcinoma[4,5] or spindle

cell carcinoma.[6,7] These two lesions correspond to forms of transition between the epithelial component and the spindle cell component.

According to Rosen et al, carcinosarcoma corresponds to the association of a breast carcinoma and a mesenchymal tumor without visible transition zones between the two neoplastic proliferations.[8]

The origin of this tumor is not yet determined, but according to several studies the cells are myoepithelial.

Carcinosarcoma is characterized by its large size with an average of between 3 and 4 cm (5cm for our patient) and by its faster growth than in other classic invasive carcinomas.

Macroscopically, it is characterized by a larger size compared to the infiltrating ductal carcinoma as already described, well-demarcated contours, with a firm consistency, solid to the cut with cystic changes. Regarding the immunohistochemical study, the hormone receptors are negative in the majority of cases as well as the herceptest with a negativity of high molecular weight cytokeratins with a broad spectrum and a positivity of vimentin. However, markers of myoepithelial differentiation can be positive, such as low molecular weight cytokeratins (CK5/6, CK14) in less than 50% of cases, p63 and SMA.

Carcinosarcoma poses a problem of differential diagnosis on histopathology examination with high-grade phyllodes tumors with malignant transformation of the epithelial component because of the therapeutic and prognostic implications. The patient's history, the absence of co-expression of epithelial and myoepithelial markers at the level of the mesenchymal component, make it possible to correct the diagnosis of phyllodes tumors.[9] Other differential diagnoses include primary breast sarcomas such as leiomyosarcoma, osteosarcoma, fibrosarcoma, and malignant histiocytofibroma, characterized by the absence of the epithelial component.

The treatment of breast carcinosarcoma is the same compared to other types of breast cancer based on surgery, chemotherapy and radiotherapy depending on the indications.

The evolution of carcinosarcoma tends towards local recurrences, in particular axillary metastases, and a high frequency of visceral metastases, especially pulmonary, ranging from 41% to 46%.[10,11]

Regarding prognosis, Beatty et al reported a 5-year overall survival ranging from 49 to 68%. However, when comparing 5-year overall survival and disease-free survival in breast cancer patients in general, the difference was not significant (84% vs 93%, 83%, 90%, respectively).

CONCLUSION

Carcinosarcoma is a rare tumor with a broad morphological spectrum, which makes histological diagnosis difficult. However, molecular biology studies provide information on histogenesis thus allowing to direct the diagnosis.

REFERENCES

1. Tavassoli FA, Devilee P, ed. WHO classsification of tumours. Pathology and genetics of tumours of the breast and female genital organs. Lyon: IARC Press,
2. Carter MR, Hornick JL, Lester S, Fletcher CD. Am J Surg Pathol., 2006; 30: 300-9.
3. Gersell DJ, Katzenstein AL. Spindle cell carcinoma of the breast. A clinicopathologic and ultrastructural study.
4. Meis JM, Ordonez NG, Gallager S. Sarcomatoid carcinoma of the breast. An immunohistochemical study of six cases.
5. Bauer TW, Rostock RA, Eggleston JC, Baral E. Spindle cell carcinoma of the breast: four cases and review of the literature
6. Rosen PP, Ernsberger D. Low-grade adenosquamous carcinoma: a variant of metaplastic mammary carcinoma.
7. Zhuang Z, Lininger RA, Man YG, Albuquerque A, Merino MJ, Tavassoli FA. Identical clonality of both components of mammary carcinosarcoma with different loss of heterozygosity. Mod Pathol., 1997;10: 354-62.
8. Rosen PP. Carcinoma with metaplasia. In: Breast pathology. Diagnosis by needle core biopsy. 2nd Ed. Philadelphia: Lippincott Raven, 2001 ; 151-8.
9. 12 Wargotz ES, HJ Norris. Metaplastic carcinomas of the breast. I. Matrix-producing carcinoma.
10. 1 Mestiri. S, Trabelsi.A, Stita.W, Sriha.B, Mokni.M, Korbi.S. Carcinosarcome du sein : difficultés de diagnostic et de prise en charge. Imagerie de la Femme 2007.
11. Tokudome. N, Sakamoto. G, Sakai.T, Sarumaru.S, Okuyama.N, Hori.f A case of carcinosarcoma of the breast Breast cancer, April 2005; 12(2) : 149 -153.