

## CASE REPORT

# Carcinoma en cuirasse associated with zosteriform metastasis in breast adenocarcinoma

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**Abstract**

Breast cancer is the first cancer associated with cutaneous metastasis (CM). The clinical presentation of these metastases is comprehensive. We report an original case of carcinoma en cuirasse associated with zosteriform metastasis that indicates the development of contralateral breast cancer.

**KEYWORDS**

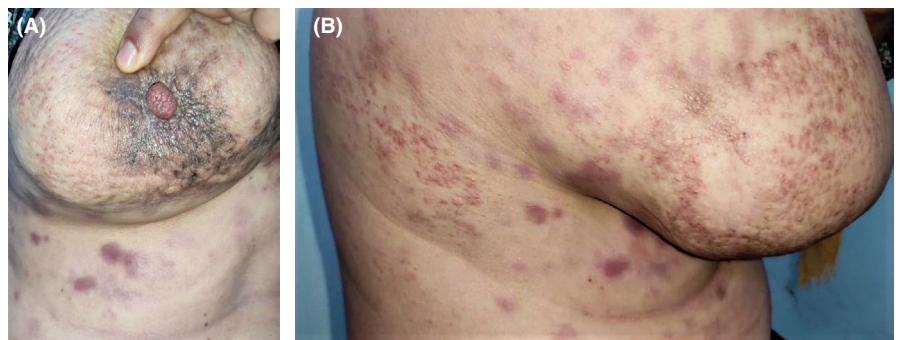
breast carcinoma, carcinoma *en cuirasse*, cutaneous metastasis, zosteriform metastasis

## 1 | INTRODUCTION

Breast cancer (BC) is the first internal malignancy associated with cutaneous metastasis of different clinical presentations.<sup>1</sup> We report a case of carcinoma *en cuirasse* (CC) associated with zosteriform metastasis (ZM) revealing a contralateral BC.

## 2 | CASE HISTORY AND EXAMINATION

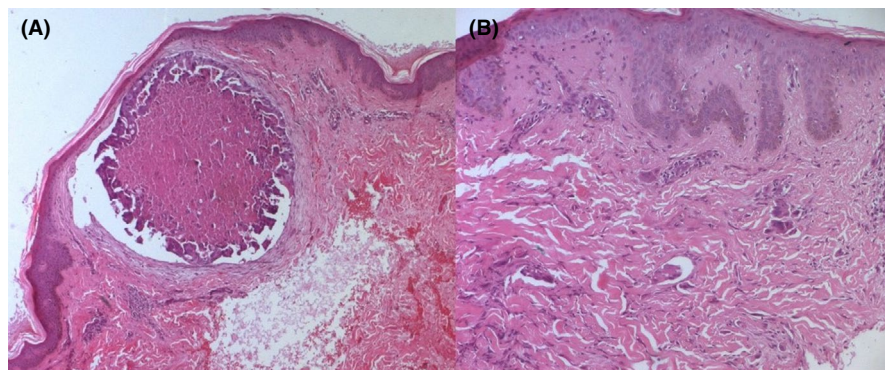
A 40-year-old woman presented with painful erythematous papules grouped on the right side of the trunk of 2 months duration. She had a history of left infiltrating ductal carcinoma 3 years back, treated with chemotherapy,



**FIGURE 1** (A, B) *peau d'orange* with multiple violaceous indurated plaques and erythematous papules in zosteriform distribution

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**FIGURE 2** (A, B) a heavy dermal infiltrate of neoplastic cells with lymphangitic carcinomatosis and densification of collagen

mastectomy, and radiotherapy. On examination, numerous firm erythematous clustered papules were present over the right side of the chest in a dermatomal distribution (T4–T6) with peau d'orange appearance (Figure 1). The underlying skin was indurated. Many diffuse sclerodermiform erythematous plaques were also present. There was a palpable mass in the right breast.

### 3 | INVESTIGATIONS AND DIAGNOSIS

Two biopsies were performed from a papule and an indurated plaque revealing same histologic features; a dense dermal infiltration of malignant epithelial cells delimiting cribriform clusters with lymphangitic carcinomatosis. Collagen densification was also seen (Figure 2A,B). Microbiopsy of the breast nodule confirmed the malignant origin. No distant metastasis was detected. Contralateral BC with CM the final diagnosis.

### 4 | MANAGEMENT AND FOLLOW-UP

The patient was started on palliative chemotherapy after a multidisciplinary team meeting.

### 5 | DISCUSSION

CMs in patients with BC occur in 23,9%.<sup>2</sup> Erythematous papules and nodules are the most common presentation (80% of cases).<sup>3</sup> Less commonly, atypical variants of skin involvement in BC can mimic common processes; erysipelas (carcinoma erysipeloides), lymphangioma circumscriptum, and cutaneous vasculitis (carcinoma telangiectaticum).<sup>3</sup> CC and ZM, presented here, resembling morphea and herpes zoster, respectively, are extremely rare. In those exceptional cases, only histology can make the diagnosis which often resembles the primary cancer.

CC is seen in only 3% of patients with CMs from BC.<sup>3</sup> It is characterized by erythematous indurated plaques with diffuse sclerodermatous induration of the chest wall skin.<sup>2</sup> It is most commonly linked with local recurrence of BC following treatment, as in our case, but it can also be a clinical presentation of a primitive tumor.<sup>3</sup> CC is characterized histologically by dense fibrosis with few neoplastic cells and decreased vascularity, making it highly resistant to chemotherapy.<sup>2</sup>

ZM is a rarely seen subtype with only a few hundred cases in the literature, among them 12 cases due to BC.<sup>6</sup> It may be distributed along dermatomes in various clinical patterns, including nodular, papulovesicular, or vesiculobullous.<sup>2</sup> Several theories have been proposed to clarify the pathogenetic mechanism of zosteriform dissemination. It has been postulated to occur as a Koebner response to recent herpes zoster.<sup>4</sup> Our patient did not report any skin lesion over the area previously. ZM may also be generated by the diffusion of tumor cells from the perineural lymphatic vessels.<sup>2</sup> This is likely to be the cause in our patient having lymphangitic carcinomatosis in histology. Occurring in oncologic immunosuppressive patients, ZM can be confused with herpes zoster infection. Definite diagnosis is made on microscopic examination. In our case, ZM occurred in the contralateral site, revealing a contralateral BC. The association of CC and ZM has not been reported yet.

### 6 | CONCLUSION

In conclusion, CM should be included in the differential of potentially benign lesions in patients with neoplastic disease history.

#### ACKNOWLEDGEMENTS

None.

#### CONFLICT OF INTEREST

The authors declare that there are no conflict of interest in this work.

## AUTHOR CONTRIBUTIONS

Miss. Refka Frioui, is the guarantor of the content of the manuscript, included the data and analysis. Dr. Azza Ghanem contributed to interpretation of data and revision of the manuscript. Miss. Mariem Tabka contributed to data collection. Dr. Badreddine Sriha is the dermatopathologist who analyzed the histological images. Dr. Colandane Belajouza and Dr Mohamed Denguezli contributed to analysis and interpretation of data, revised it critically for important intellectual content, and final approval of the version to be submitted.

## ETHICAL APPROVAL

Informed consent was obtained from the patient.

## CONSENT

The examination of the patient was conducted according to the principles of the Declaration of Helsinki. The authors certify that they have obtained all appropriate patient consent forms, in which the patient gave his consent for images and other clinical information to be included in the journal. The patient understands that his name and initial will not be published and due effort will be made to conceal his identity, but that anonymity cannot be guaranteed.

## DATA AVAILABILITY STATEMENT

All data generated are included in this published article.

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