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Journal of the Chinese Medical Association 76 (2013) 354–357

www.jcma-online.com

Case Report

Primary infiltrating ductal carcinoma of the axillary breast with metastasis to the contralateral chest wall

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Received March 8, 2011; accepted January 3, 2012

Abstract

Primary infiltrating ductal carcinoma of the axillary breast is rare and has a high frequency of lymph node (LN) involvement. We report a woman with primary infiltrating ductal carcinoma arising from the right axillary breast with metastasis to the contralateral chest wall. Excisional biopsy of the left chest wall nodule and the right axillary mass was carried out and both showed invasive ductal carcinomas histologically. The lesion of the right axillary mass arose from the breast tissue, rather than the LN. Further surgery proved the right axillary LN metastasis. After further review, a primary infiltrating ductal carcinoma of the right axillary breast with metastasis to axillary LNs and contralateral chest wall was diagnosed. The patient also received chemotherapy and radiation and there was no evidence of tumor recurrence after treatment. The present report demonstrated a rare case with uncommon manifestation. Lesions of uncertain origin around the periphery of the breast should be suspected for breast carcinoma.

Keywords: axillary; breast cancer; metastatic; primary

1. Introduction

Ectopic breast tissue is reported in 2–6% of the general population, with most cases being located in the axillary region.[1–4] The same pathology that can affect normally positioned breasts, including carcinoma, can occur in ectopic breast tissue.[5] Primary carcinoma of ectopic breast tissue has been reported only in a small number of cases. High frequency of axillary node involvements was noted for cancer arising from the axillary breast.[2]

2. Case report

A 50-year-old female patient had a history of left breast phyllodes tumor after subcutaneous mastectomy in April 2007. The pathologic findings showed an overgrowing hypercellular mesenchymal component (Fig. 1A), and mitotic figure revealed 4/10 high power field (HPF) (Fig. 1B), which were consistent with phyllodes tumor. She had chief complaints of several small nodules over the surgical scar area since July 2009. Physical examination found several small (<1 cm) nodules over the left chest wall just around the prior surgical scar. Breast echogram showed post-mastectomy with some small nodules in the superficial fatty layer and lymphadenopathy was suspected. Confluent soft tissue nodes in the right axillary region were also detected. A mammogram

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1726-4901/$ - see front matter
http://dx.doi.org/10.1016/j.jcma.2013.02.002

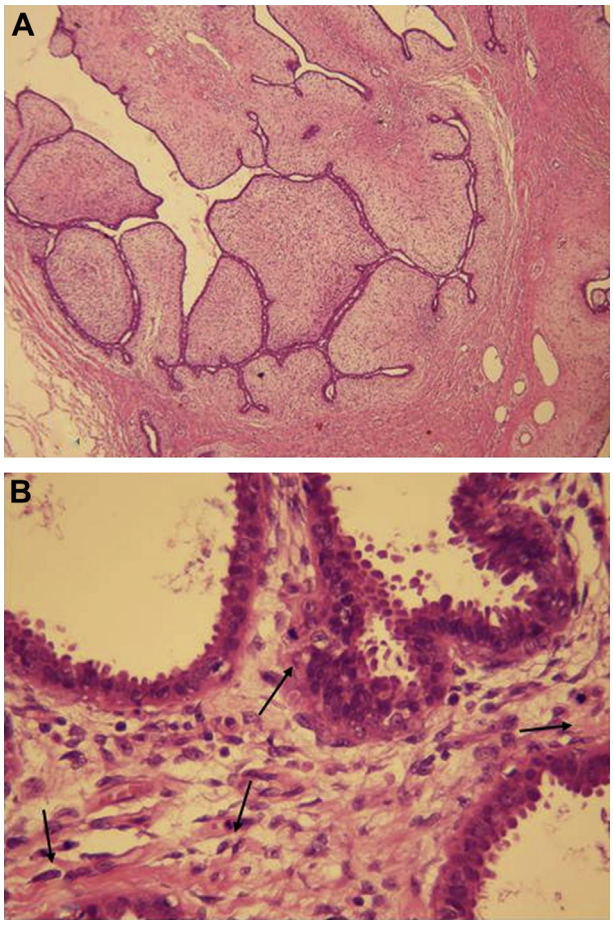

Fig. 1. Histological staining of the left breast tumor showed: (A) the epithelial component arranged in clefts surrounded by an overgrowing hypercellular mesenchymal component; (B) mitotic figure revealed 4/10 HPF (arrow). HPF.

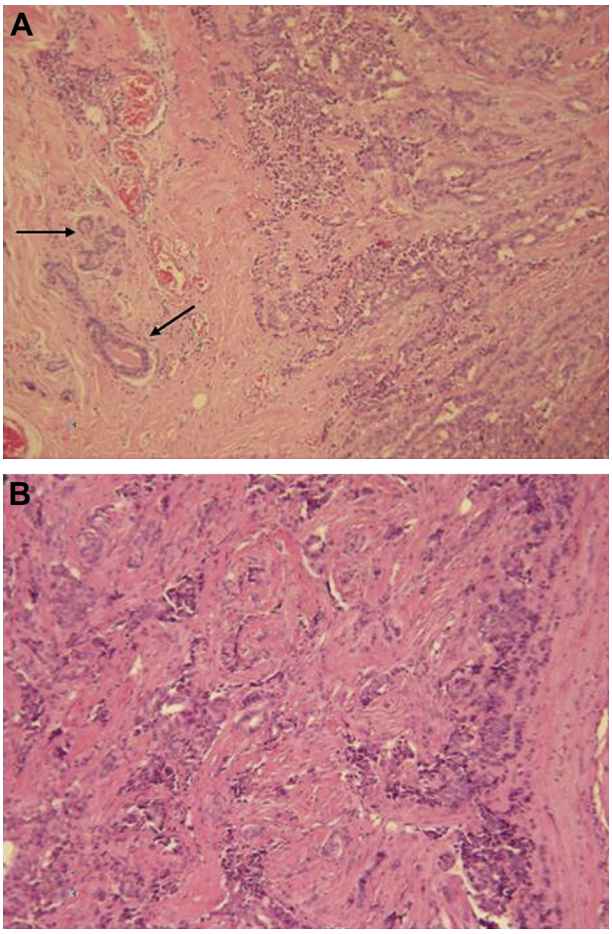

Fig. 2. Specimens from (A) the right axillary mass and (B) the left chest wall showed invasive ductal carcinoma. Ectopic breast tissue (arrow) was found adjacent to the tumor.

indicated that a small opacified shadow in the right axillary region may be due to lymph node (LN) involvement, and there was no evidence of mass shadow or malignant calcification in breast parenchyma.

She received excisional biopsy, and pathology revealed a 2.3-cm invasive ductal carcinoma arising from the right axillary breast (Fig. 2A), and the left chest wall nodules also showed this pattern (Fig. 2B). The histology from both specimens showed: (1) estrogen receptor (ER), moderately positive intensity in 90% of tumor cells; (2) progesterone receptor (PR), moderately positive intensity in 90% of tumor cells; (3) HER2/neu, weakly positive intensity in 60% of tumor cells (+/+++); (4) immunohistochemical stain, GCDFP-15(+); and (5) histological grade II. A postoperative positron emission tomography–computed tomography (PET–CT) scan displayed residual tumor or post-biopsy inflammatory change over the left chest wall, and mildly elevated fluorodeoxyglucose (FDG) uptake in the right axillary and mediastinal regions (Fig. 3).

The patient received further surgery to her right axillary breast and LNs, and the pathology showed post-excision changes without residual tumor over the right axillary breast, but metastatic invasive ductal carcinoma was noted in the right axillary LNs. Five out of six were positive for level I, and three out of three for level II.

The final diagnosis was invasive ductal carcinoma of the right axillary breast with regional axillary LN metastasis. The left chest wall nodules were probably the metastatic lesions from the right axillary breast cancer; however, it could be synchronous cancer, and this remains undetermined.

The patient received six cycles of chemotherapy with paclitaxel 240 mg and cisplatin 80 mg. The subsequent chest CT scan found the prior enlarged mediastinal LN disappeared, but the left chest wall nodules did not regress. The patient received local radiotherapy (RT) after chemotherapy. The RT fields covered the right axillary area and the ipsilateral supraclavicular area for 50.4 Gy, followed by the electron beam boost to the right axillary surgical scar for an additional 10.8 Gy. The left chest wall scattered nodules were irradiated by the electron beam for 50.4 Gy. The nodules over the left chest wall disappeared after radiation. The treatment course was smooth without any unexpected interruption. Currently, the patient has no evidence of disease 18 months after the diagnosis.

3. Discussion

We presented a rare case of primary axillary breast cancer with an unusual presentation. The patient's past history of phyllodes