

Primary Squamous Cell Carcinoma of Breast in a Lactating Mother: A Rare Case Report

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Abstract

We report a case of 32 years old woman diagnosed as primary squamous cell carcinoma during lactation, which is exquisitely rare. Histopathological examination confirms the diagnosis. Due to rarity of the entity the diagnosis and management is challenging.

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Introduction

Breast cancer is rare in pregnancy and lactation and varies from 0.4 to 5.0% in western countries, and, reported to be 0.4% – 1.3% in Japan.¹ Primary squamous cell carcinoma (PSCC) of the breast comprises an rare form of invasive breast carcinoma with an estimated prevalence of 0.06-0.2% among all breast cancers and less than 0.1% of invasive breast cancers. It was first described more than a hundred years ago.^{2,3}

Here, we report a rare case in which a 32-year-old lactating mother presents with a rapidly increasing left breast mass, ultimately diagnosed as PSCC.

Case Report

A 32-year-old lactating mother noticed a breast lump in her upper outer quadrant of left breast. The lesion was rapidly increasing for seven months. Neither past nor family history

was significant. This is her second child, lactating for nine months. Age of her first child is 5 years. No prior history of breast lump or no previous history of nipple discharge existed.

On examination, the tumor was 3.5x3 cm, firm, well defined, free from overlying skin or underlying structures. No lymph node was palpable in axilla.

Ultrasonogram revealed a hypoechoic lesion with irregular margins. Mammogram was not done. Then the patient underwent core biopsy. Following biopsy, histopathology revealed sheets of anaplastic epithelial cells having nuclear pleomorphism, abundant cytoplasm, keratinization and intercellular bridges. These findings corresponded to a metaplastic breast carcinoma, having squamous component only.

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Based on the pathological findings, modified radical mastectomy was done with axillary clearance. Gross examination revealed solid tumor mass with maximum dimension of 3.2 cm involving the upper outer quadrant of left breast (Figure 1). Microscopic examination of the mass revealed sheets of malignant epithelial cells with enlarged nuclei, irregular nuclear contours, abundant pale eosinophilic cytoplasm, distinct cell borders with intercellular bridges, brisk mitotic activity, and areas of necrosis (Figure 2). The deep resection margin was free of tumor, and the overlying skin was uninvolved by the carcinoma. No mesenchymal component was identified. No lymphovascular invasion was seen. The histopathological features were suggestive of a squamous cell carcinoma. Thirteen lymph

nodes were identified in the axilla. All were free of tumor metastasis.



Figure 1. Gross examination of the tumor reveals a grey white mass which has got no connection with skin and the deep resection margin is free

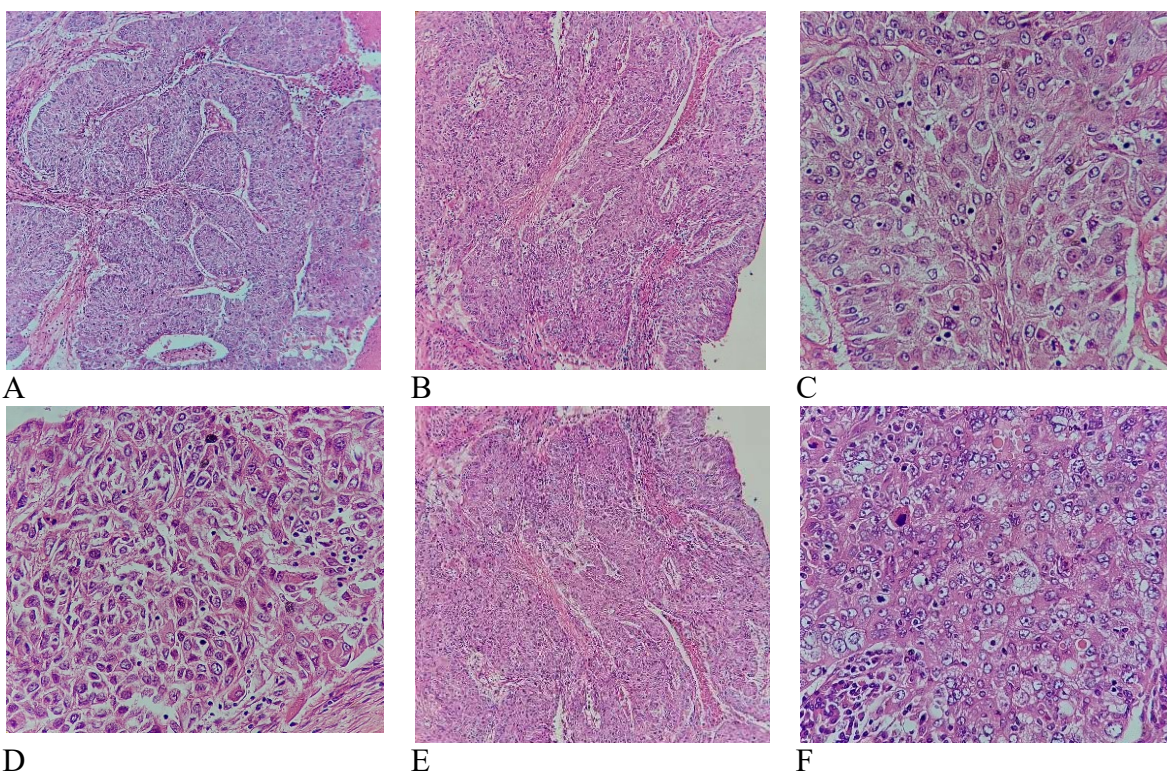


Figure 2. Sheets of anaplastic epithelial cells without any ductal or mesenchymal component (A, B and C). These cells show nuclear pleomorphism, abundant cytoplasm, keratinization and intercellular bridges (C, D and E)

Discussion

Primary squamous cell carcinoma of breast is a rare neoplasm of breast. During lactational period the condition is exquisitely uncommon. The exact origin of SCC of breast is unclear. Some authors believe that SCC of breast arise as a consequence of squamous metaplasia of breast ducts, while others suggest that it arises from benign breast conditions such as abscesses, fibroadenomas, cysts or in association with implants.^{4,5,6}

Squamous cell carcinoma (SCC) of the breast is diagnosed when more than 90% of the malignant cells are of squamous type. World health organization includes these tumors as metaplastic carcinoma. Several pathological criteria are required to establish a firm diagnosis of primary squamous cell carcinoma of the breast: (1) the tumor origin must be free from the overlying skin and nipple; (2) the infiltrating component of the breast cancer is predominantly of squamous type (> 90%); (3) no other invasive neoplastic elements, ductal, mesenchymal or otherwise present in the tumor (4) another site of primary squamous cell carcinoma in the patient must have been excluded.⁶

PSCC tend to be somewhat larger at presentation than other types of breast carcinoma with more than half of the reported cases with a size of more than 5 cm in diameter. No specific mammographic findings of squamous cell carcinoma of the breast have been described.⁷ To confirm diagnosis of PSCC, metastatic squamous cell carcinoma must be excluded. Common sources of metastatic squamous cell carcinoma in breast are lung, uterine cervix, urinary bladder, esophagus and oropharynx.⁸ Lymph node involvement is reported to be less.⁹ Actually, in our case we didn't get any lymph node metastasis.

The management of PSCC is radical mastectomy followed by chemotherapy and radiotherapy. Post operatively the patient was referred to the department of oncology for further management.

Conclusion

This case report is unique as we present a 32 years old lactating mother ultimately diagnosed with PSCC of the breast. A careful assessment must be made when considering breast tumors, cystic breast masses, and particularly tumors with rapid growth during lactational period. The early diagnosis and treatment constitute the cornerstone in the prognosis of this rare disease.

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