

## Primary Squamous Cell Carcinoma of the Breast with Metastasis-A Rare Case Report

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### Abstract

### Case Report

Primary squamous cell carcinoma of breast is extremely rare invasive breast carcinoma with rapid progression with incidence of 0.1% and worse prognosis. Careful assessment and diagnosis of the entity should be considered in a rapidly progressing breast tumor. We hereby reported a case of primary carcinoma breast in 80-year-old female who was managed at tertiary care centre of Rajindra Hospital, Patiala.

**Keywords:** Primary squamous cell carcinoma, prognosis, breast tumor, FNAC.

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## INTRODUCTION

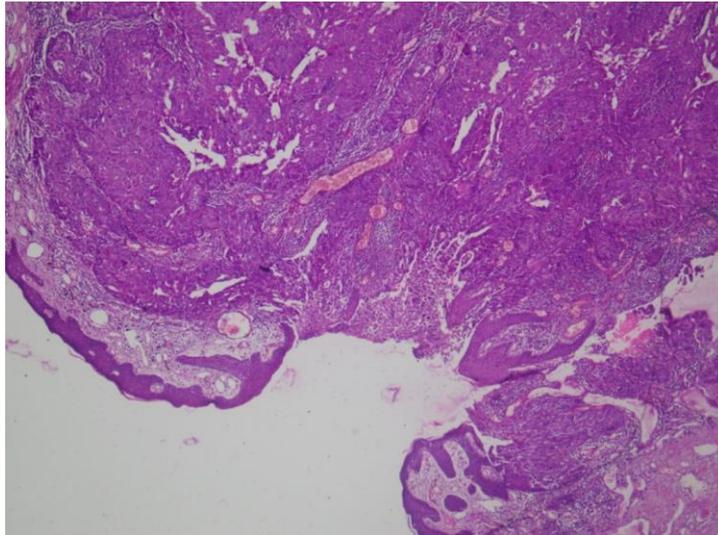
Primary squamous cell carcinoma is very rare for breast and only 0.1 % cases of breast having primary squamous cell carcinoma has been reported [1]. This type of tumor is theorized to develop from squamous metaplasia in ductal carcinoma cells. In literature, very few cases have been reported. Trucut small biopsy poses a diagnostic dilemma if evident features of keratinization are evident. Squamous cell carcinoma is an aggressive tumour associated with poor survival [2]. Because of its rarity, there are no standardizing treatment guidelines [3].

## CASE

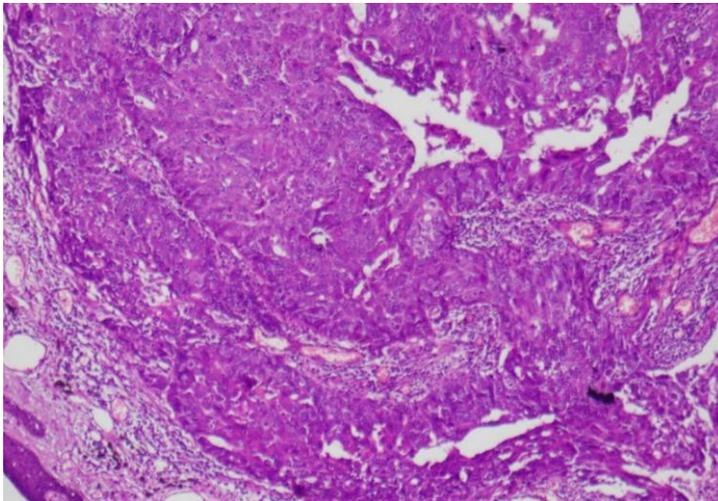
80-year-old female was admitted in tertiary care centre of Rajindra Hospital, Patiala and had palpable mass in left breast in retro areolar region involving nipple areola complex. She also had complaint of pain. It was 3cm × 3 cm in size, freely mobile, non-tender and firm. The patient underwent CECT scan for analysis of the lesion. The scan showed a heterogeneously enhancing well-defined round lesion measuring 3.4 cm × 2.8 cm with over lying skin thickening in the left retro areolar region involving nipple areola complex. A conglomerated necrotic nodal

mass measuring 4 cm × 3.1 cm seen in the left axilla depicting axillary lymphadenopathy.

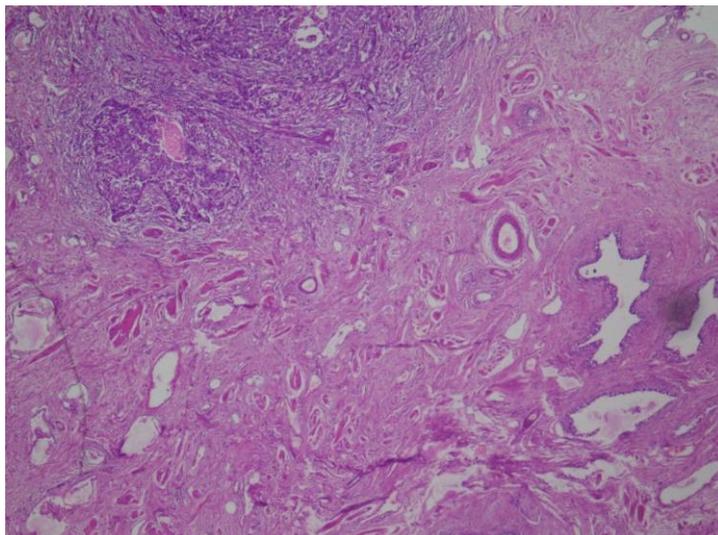
An FNAC was performed for the patient which was suggestive of invasive carcinoma and reported as Yokoyama category 5. After wards, the patient underwent a trucut biopsy which was reported as invasive carcinoma. Then the patient underwent modified radical mastectomy and same specimen was received in the Department of Pathology, Rajindra Hospital, Patiala. The tumour was unifocal and histological section showed the following findings:- H and E-stained sections from breast tissue showed malignant tumour tissue arranged in the form of nests, islands and lobules separated by thin fibrous septae with foci of squamoid differentiation with intercellular bridges as shown in (fig 1-2, 4). Individual cells were medium to large showing nuclear pleomorphism, bizarre cells, irregular nuclear contour, vesicular chromatin with prominent nucleoli and moderate amount of eosinophils cytoplasm as shown in (fig 3). Also seen areas of keratinization. The tumour was involved the ducts as well as overlying epidermis. The tumor was reported as Squamous cell carcinoma. The tumor was ER, PR, Her2neu negative and stained positive for cytokeratin 5/6.



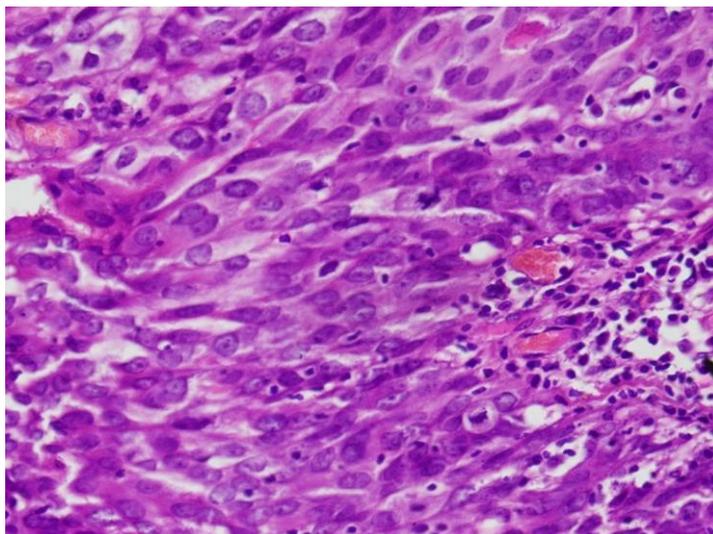
**Fig. 1:-** On 4x images malignant epithelial tumor tissue arranged in nests, islands and lobules



**Fig. 2:-** On 10 x images malignant epithelial tumor tissue arranged in nests, islands and lobules



**Fig. 3:-** On 10x microscopic view areas of tumor and normal breast tissue appreciated



**Fig. 4:- On 400 x individual tumor cells medium to large showing nuclear pleomorphism, bizarre cells and irregular nuclear contour vesicular nuclei with prominent nucleoli**

The case was staged as pT<sub>1b</sub>N<sub>1a</sub>M<sub>0</sub> (8<sup>th</sup> edition AJCC). After which the patient was reassessed clinically and found to be T<sub>4</sub>N<sub>2</sub>M<sub>0</sub>. Then a specimen of left axillary swelling was received in Department of Pathology which showed replacement of lymphoid tissue by malignant epithelial tumor tissue arranged in the form of nests and sheets as well as scattered singly. Individual tumor cell showed pleomorphism, irregular nuclear contour, vesicular nuclei with prominent nucleoli with moderate amount of eosinophilic cytoplasm. Keratin pearls and individual cell keratinization noted. There were also seen areas of keratinization, areas of necrosis and areas of hemorrhage.

## DISCUSSION

Primary squamous cell carcinoma of the breast is very aggressive and rare cancer. It is hypothesized to rise from squamous metaplasia of ductal carcinoma cells or mammary duct epithelium [4]. It usually presents in postmenopausal women [5], however it also has been stated in young women [6]. It has been diagnosed in adult women of ages ranging from 29 years to 90 years with a median of 52 years of age.

Additionally, the tumour of squamous cell carcinoma must meet the following criteria:

- No other neoplastic changes other than squamous cell carcinoma.
- No other primary site of squamous cell carcinoma.
- No involvement of overlying skin or nipple.

In this case, the patient meets all the criteria. There are no specific mammogram/ CECT characteristics of squamous cell carcinoma [7]. In our case, CECT scan showed a heterogeneously enhancing well defined round lesion in left retro areolar region involving nipple areola complex. In histological section

of tissue sample, the malignant tumour tissue was arranged in the form of nests islands and lobules separated by thin fibrous septa with foci of squamoid differentiation. Tissue sample shows the sheets of malignant squamous cell with intercellular bridges and Keratin formation.

## CONCLUSION

We hereby reported a case of primary carcinoma breast in 80-year-old female who was managed at tertiary care centre of Rajindra Hospital, Patiala. Although a rare breast cancer subtype, pure squamous cell carcinoma of the breast is considerable in interest due to its pathological heterogeneity and differences in clinical behavior.

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