



PRIMARY SQUAMOUS CELL CARCINOMA OF BREAST WITH IPSILATERAL LYMPHNODE METASTASIS IN A YOUNG FEMALE- A RARE ENTITY WITH UNUSUAL PRESENTATION.

Pathology

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ABSTRACT

Primary squamous cell carcinomas of breast (SCC) are rare tumors with poor prognosis and older age of presentation in sixth decade of life. Amongst SCC of breast only 10 to 30 % metastasize to lymphatics. These tumors are usually triple negative for hormone receptors due to which these are refractory to hormone based therapies. To our best knowledge, till date only a single case of Her2neu positivity in SCC breast is reported in English literature by Karamouzis et. al. Here, we report a case of breast primary SCC in a 28 years old young female with ipsilateral axillary lymph node metastasis and Her2neu overexpression.

KEYWORDS

Breast squamous cell carcinoma, lymph node metastasis, Her2 neu overexpression, young female.

INTRODUCTION

Primary squamous cell carcinoma (SCC) of breast is a very rare entity comprising of 0.1% of all invasive breast carcinomas¹. It is a hormone receptor negative highly aggressive tumor with quite poor prognosis². It usually occurs in older age group females with mean age of presentation being 54 years. Also lymph node metastasis is not seen in 70 to 90 % of primary breast SCC. Here, we present a case of primary squamous cell carcinoma of breast with ipsilateral axillary lymph node metastasis in a 28-years old young female.

CASE REPORT

A 28-years old female presented to surgical outdoor patient department with complain of breast lump in right breast for last three months which was progressively increasing in size. On examination the lump was measuring 9 X 8 cm² involving all four quadrants of the breast. The lump had well defined margins, was hard in consistency, non mobile and non tender. It was fixed to underlying tissue but overlying skin and nipple-areola complex were free of tumor clinically. Ipsilateral axillary lymph node was palpable and was 2 X 2 cm² in size. Contralateral breast and axilla were free. She had no previous history of any breast pathology and had no family history of breast carcinoma. Mammography was not done as she couldn't afford the same due to poor economic background. Fine needle aspiration cytology (FNAC) was performed from right breast lump and axillary lymph node. Smears examined from both the sites were cellular with presence of atypical squamous epithelial cells scattered singly and in clusters. These cells had hyperchromatic and pleomorphic nuclei. Background showed necrosis and hemorrhage. A differential diagnosis of (1) primary pure squamous cell carcinoma of breast (2) Metaplastic carcinoma of breast (3) metastatic SCC from any other primary was given on cytology (Figure.1). An extensive workup showed no evidence of any primary malignancy at another site.

On histological examination sections from multiple areas showed sheets of atypical squamous epithelial cells having moderate degree of cellular pleomorphism, abundant eosinophilic cytoplasm, hyperchromatic and pleomorphic nuclei. Many mitotic figures were noted. Intaductal carcinoma was also seen. No other mesenchymal or epithelial component was seen. On immunohistochemistry the tumor cells were negative for estrogen receptor (ER), progesterone receptor (PR) and showed membranous positivity (3+) for Her2 neu and nuclear positive for P63. Thus, a diagnosis of primary squamous cell carcinoma with ipsilateral axillary lymph node metastasis was given, modified Bloom Richardson score (3+3+2=8) 8, grade III (Figure.1 and 2).

DISCUSSION

The histological origin of SCC breast is not well explained. However, it is proposed by many theories that it arises from metaplasia of benign breast diseases like fibroadenoma, phyllodes, persistent chronic inflammation or epidermal cyst¹. The mean age of presentation of pure SCC of breast is 54 years³. However, the present case was a 28 years old female without any history of any previous breast pathology.

A tumor must meet the following Macia et al criteria to be labeled as primary SCC of breast (1) absence of any primary SCC at any other site (2) predominance of squamous component (> 90%) on histological examination (3) absence of overlying skin involvement⁴. The present case had purely squamous component and the overlying skin was free of tumor. These tumors are very aggressive with relatively large size reaching upto 5 cm which are rapidly increasing in size within a few weeks^{5,6}. Our patient also had a short history of three months with rapid increase in size of the lump to the present size of 9 X 8 cm².

Squamous cell carcinoma breast are known to have less lymphatic spread in comparison to invasive ductal carcinoma. Only 10 to 30 % of SCC breast have lymphatic metastasis at the time of presentation^{6,7}. The present case also had ipsilateral axillary lymph node metastasis at the time of presentation. SCC breast is triple negative for ER, PR, Her2neu and positive for P63. On contrast invasive ductal carcinomas are negative for P63 and may or may not be positive for ER, PR and Her2neu depending on the molecular classification. The present case was negative for ER, PR and showed nuclear positivity for P63. Whereas there was overexpression of Her2neu with 3+ membranous positivity. Karamouzis et. al had also reported Her2neu expression in SCC breast in his case report⁸.

Primary SCC have a poor prognosis which depends largely on the tumor size and stage. It has a 5 year survival rate of 64%¹. Radical mastectomy is the initial management along with adjuvant radiotherapy ± chemotherapy or hormonal therapy. Although these tumors are refractory to hormonal therapy as these are triple negative for hormonal receptors but patients receiving chemotherapy have better survival rate than those who have not^{9,10}. The present case although was negative for ER and PR but it was 3+ positive for Her2neu receptors. EGFR receptor positivity can be helpful in management in these patients. EGFR receptor antagonist/inhibitors like taxanes and platinum based chemotherapies should be further studied for treatment of breast SCC patients in future^{6,11}.

To conclude, primary breast squamous cell carcinomas are rare entity with poor prognosis. Although rare lymphatic metastasis, young age of presentation and Her2 neu overexpression should not rule out the possibility of pure squamous cell carcinoma. Also, these tumors are not hormone therapy responders so further studies with larger case series should be done for proper management strategies.

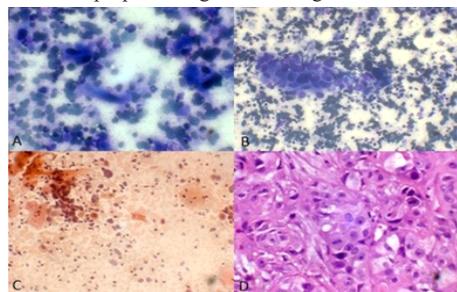


Figure.1 (A) Giemsa stain 200X showing scattered atypical squamous

cells. (B) Giemsa stain 200X showing clusters of atypical squamous cells (C) Papanicolaou stain 200X showing clusters and singly scattered atypical squamous cells. (D) H& E stain 200X showing sheets of atypical squamous cells and atypical mitosis.

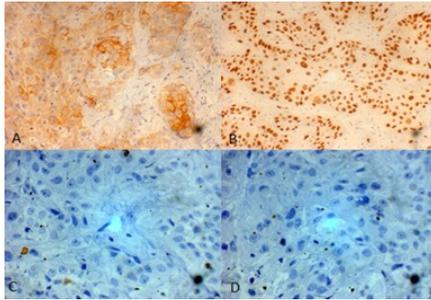


Figure.2 Immunohistochemistry 200X (A) Her2neu 3+ positivity (B) P63 nuclear positivity (C) Estrogen receptor negative (D) Progesterone receptor negative.

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