



PURE PRIMARY SQUAMOUS CELL CARCINOMA OF BREAST: A RARE CASE REPORT

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ABSTRACT

Pure Primary Squamous Cell carcinoma of breast is a very rare neoplasm. The reported incidences vary from 0.04% to 0.1% of all breast carcinomas. We report a case of Primary Squamous Cell Carcinoma of breast in a 50 years old female. The lady present with a left breast lump since 6 months. A squamous cell carcinoma was suspected on FNAC and was later confirmed by histopathology. The tumor was triple negative for ER, PR and HER 2/Neu, while immunopositive for pancytokeratin. The disease spread and therapy strategies are different from common breast carcinomas.

Key words:

Pure Squamous Cell Carcinoma, Breast, Triple Negative

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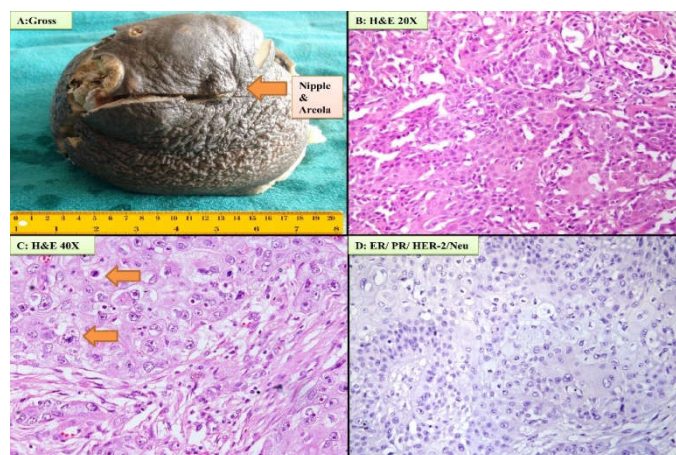
INTRODUCTION

Pure Primary Squamous Cell carcinoma of breast is a very rare neoplasm. The reported incidences vary from 0.04% to 0.1% of all breast carcinomas¹. One must exclude a squamous cell carcinoma originating from epidermis or a metastasis from different location². A pure squamous cell carcinoma should be diagnosed when more than 90% of malignant cells are of squamous type². There should be no evidence of tumor origin from breast skin or a metastasis from squamous cell carcinoma elsewhere from the body. These tumors are usually triple negative for ER, PR and Her2/Neu immunohistochemistry⁴. Clinical and radiological findings are usually non-specific and may mimic inflammatory process⁵. The treatment strategy include a combination of surgery, radiation and chemotherapy⁶. We report a case of this rare breast malignancy and review the literature.

CASE REPORT

A 60 year old female presented with a left breast lump since 6 months. Lump was 12cm X 10 cm in size. Axillary lymph nodes were not palpable. Skin ulceration was present since 2 months with normal nipple and areola. Mammography was reported as BIRADS-4.

Other routine investigations, chest X-ray and abdominal ultrasound were within normal limits.



A-Gross image showing ulcerated skin of breast however nipple areola is unremarkable,
B & C- Microscopic examination shows histomorphological features of squamous cell carcinoma with brisk mitotic activity,
D- Immunohistochemistry shows tumor cells are immunonegative for ER (Estrogen receptor), PR (Progesteron receptor) and HER-2/Neu.

Figure 1

FNAC showed clusters of atypical squamous cells. Cells were showing moderate pleomorphism with irregular nuclear membrane. At places prominent nucleoli were noted. Modified radical mastectomy was done.

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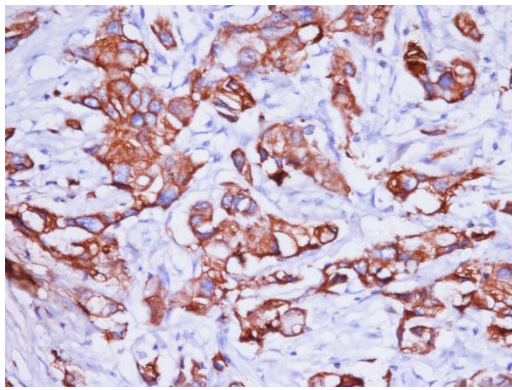


Figure 2 Immunohistochemistry shows tumor cells are immunopositive for Pan Cytokeratin.

On gross a 10cm X 8cm X 9cm grey-white mass was identified showing infiltration to skin. Post-operative histopathology showed tumor cells infiltrating in to adjacent stroma in the form of sheets, cords and nests, which demonstrate a conspicuous stromal reaction. No areas of sarcomatous differentiation or osseous metaplasia were found. No lympho-vascular invasion could be identified. Nipple and areola were free from tumor. Surgical margins and base were not involved. There was no evidence of axillary lymph node metastasis.

The tumor was subjected to immunohistochemistry (IHC). ER, PR and Her2/Neu IHCs were negative. Pan Cytokeratin IHC was positive in tumor cells. A detailed clinical examination and past history for any squamous cell carcinoma was not encountered by patient in past was confirmed, therefore based on histomorphological features (more than 90% cells of the tumor mass to be squamous type), immunohistochemistry and clinical history a diagnosis of pure primary squamous cell carcinoma of breast was confirmed.

DISCUSSION

Pure squamous cell carcinoma is a very uncommon tumour. Till date very few cases are reported in literature.² It is a malignancy of the elderly population.² This tumor is large at presentation and 50% cases have cystic component.⁷ Clinical and radiological findings are usually non-specific and may mimic an inflammatory lesion. Tumor composed entirely of malignant squamous cells with variable keratinization and spindle cells.⁵ These tumors are generally triple negative.⁶ Pure SCC of breast has a low incidence of axillary lymph node metastasis and a higher incidence of distant metastasis.

These malignancies have a poorer prognosis probably comparable to poorly differentiated adenocarcinomas of breast.^{2,8}

Upon reexamination of about 4000 breast cancer biopsies, Toikkanen *et al.* found three pure primary squamous cell carcinomas and reported that prognosis of these patients were extremely bad. A hormone base therapy is not effective because of receptor negativity.⁹

The treatment of choice is usually surgery along with adjuvant chemotherapy and/or radiotherapy. Hennessy *et al.* proposed early adjuvant radiotherapy despite being unable to demonstrate a difference (presumably because of small numbers) in the loco-regional relapse-free rate of 45% among those receiving vs 33% among those not receiving radiotherapy.⁶

Adjuvant and neoadjuvant chemotherapy regimens used at M.D. Anderson Cancer Center include 5-fluorouracil alone, 5-fluorouracil/cisplatin, 5-fluorouracil/taxane, 5-fluorouracil/cisplatin followed by paclitaxel, and cyclophosphamide plus methotrexate plus fluorouracil. Hennessy *et al.* reported no benefit to neoadjuvant therapy.^{6,10}

CONCLUSION

Squamous cell carcinoma of the breast is a rare, generally aggressive disease associated with locoregional and distant relapses. Current surgical management is similar to that for the more common adenocarcinoma. These malignancies usually present as large primary tumors with low LN involvement and are hormone receptor negative.

We report this case because of the rarity of pure squamous cell differentiation in breast malignancies.

Conflict of Interest

None

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