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Images in Medicine

Oncology Section

Squamous Cell Carcinoma of the Breast: A Rare Diagnostic Challenge

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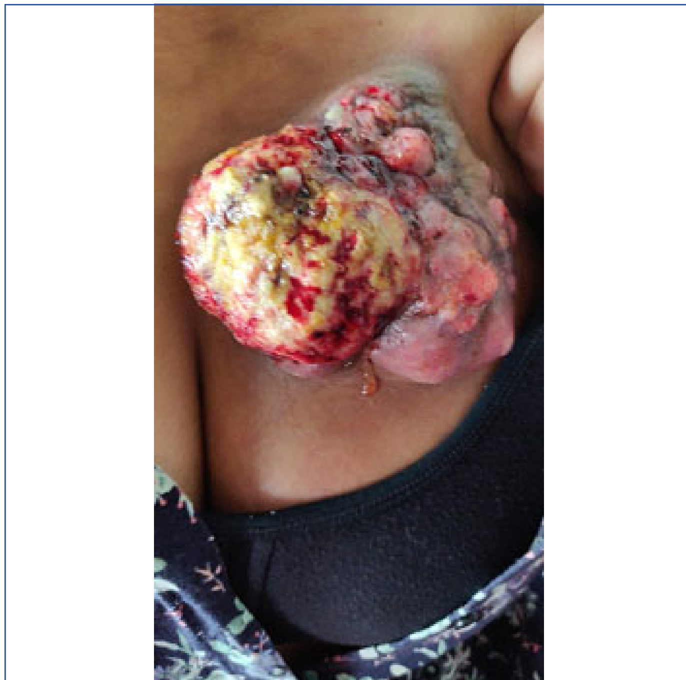
Squamous Cell Carcinoma (SCC) of the breast is rare and aggressive. The prevalence of SCC of the breast is extremely low, accounting for less than 0.1% of all primary invasive breast cancers. Squamous cells are not normally present in the breast, which explains the rarity of this malignancy in the breast [1].

A 23-year-old, unmarried, regularly menstruating female presented to the outpatient department with a history of a rapidly increasing left breast swelling for the past two years. She reported pain, intermittent bleeding, purulent discharge, and foul odour emanating from the mass. The patient had no nipple discharge and had not taken oestrogen/progesterone–containing medications. The patient had no family history of malignancy or any other medical conditions like Human Papilloma Virus (HPV) or Acquired Immunodeficiency Syndrome (AIDS), compromising the immune system and making her prone to malignancy.

Physical examination revealed a large, exophytic, ulcerated lesion measuring approximately 5.0×6.0×6.2 cm, which was observed in the upper inner quadrant of the left breast with signs of secondary infection. [Table/Fig-1]. For establishing the diagnosis, an incisional biopsy was taken from the lesion and sent for histopathological examination, which established the diagnosis of SCC of the breast, Stage IV.



[Table/Fig-1]: Large, exophytic, ulcerated breast mass with purulent components suggestive of fungating breast carcinoma (SCC of the breast).

On a Fluorodeoxyglucose Whole-Body Positron Emission Tomography–Computed Tomography (18F-FDG WB PET CT), the study revealed an FDG avid heterogeneously enhancing soft tissue density lesion with adjacent stranding and thickening in the upper inner quadrant of the left breast (~ 5.0×3.8×5.0 cm). The study also revealed a few non-FDG-avid left axillary lymph nodes, the largest measuring 0.8×0.6 cm. Non-FDG avid showed mixed lytic and sclerotic lesions involving the sternum, bilateral iliac bones and right acetabulum were found indicating metastatic changes. The specific prevalence of presenting with skeletal metastasis is not well documented due to the rarity of the disease, but bone metastasis is an aggressive and poor-prognosis feature among breast cancer [2].

An oncologist's opinion was sought promptly, and the patient was advised chemotherapy and radiotherapy with regular follow-up. Surgical excision could not be attempted as the tumour was found to be fixed to the chest wall and in an advanced stage (Stage IV). Thereafter, the patient received 12 cycles of paclitaxel and carboplatin-based palliative chemotherapy before ultimately succumbing to her illness.

Ananthi B et al., (2022) carried out one of the most extensive Indian studies on metaplastic breast carcinomas, including those with squamous-cell differentiation, at a tertiary cancer centre. The research aimed to evaluate the clinical presentation, treatment patterns, and real-world outcomes of these rare tumours. The investigators observed that the majority of cases were triple-negative and often diagnosed at an advanced stage, resulting in worse disease-free and overall survival compared with conventional invasive ductal carcinoma. A notable finding was the high level of chemoresistance, which frequently made upfront surgery the preferred initial treatment instead of neoadjuvant chemotherapy. As the largest institutional series from India focusing on metaplastic and squamous variants, the study highlighted key clinical issues, including late presentation, suboptimal therapeutic response, and the necessity for more individualised management strategies [3].

Badge SA et al., (2014) presented an in-depth case report on pure Primary Squamous-Cell Carcinoma (PSCC) of the breast, emphasising its diagnostic and histopathological features. The authors detailed the diagnostic criteria, noting that at least 90% of the tumour must comprise squamous cells and lack other malignant components. They highlighted the exceptional rarity of PSCC and its usual presentation in older women, along with its poor responsiveness to standard chemotherapy. The report also stressed the critical need to differentiate true primary PSCC from secondary squamous lesions or tumours arising from the skin or chest wall, as an incorrect diagnosis could have significant implications for treatment planning [4].

Han Y et al., (2021) study analysed population-based data on primary SCC of the breast, a rare and aggressive subtype. Patients commonly presented with larger, high-grade tumours and advanced-stage disease. Mortality was notably high, with overall survival significantly worse than that of typical breast cancers. Older age, advanced stage, and lack of surgery were strong predictors of death, underscoring the poor prognosis and the need for early detection and aggressive management [5].

In summary, although SCC of the breast is an extremely uncommon diagnosis in India, the limited studies available, including institutional

reviews and individual case reports, provide valuable information on its pathological characteristics, clinical course, and treatment approaches. Going forward, establishing multi-centre collaborations, national cancer registries, and genomic research initiatives will be crucial to identifying therapeutic targets and improving patient outcomes. With coordinated efforts and consistent documentation, the Indian oncology community can advance the understanding and management of this rare and aggressive form of breast cancer.

This patient had a rare presentation with a fungating growth involving the left breast and the chest wall, along with skeletal lesions indicating metastasis.

REFERENCES

[1] Darlington CD, Anitha GF. Squamous cell carcinoma of the breast mimicking chronic breast abscess. Niger J Surg. 2019;25(1):101-03.

[2] Huang JF, Shen J, Li X, Rengan R, Silvestris N, Wang M, et al. Incidence of patients with bone metastases at diagnosis of solid tumours in adults: A large population-based study. Ann Transl Med. 2020;8(7):482.

[3] Ananthi B, Rajaraman S, Ganesan TS, Swaminathan R, Kumar R, Dhanushkodi M, et al. Metaplastic carcinoma of the breast: Real-world outcome from a tertiary cancer centre in India. ecancermedicalscience. 2022;16:1490.

[4] Badge SA, Nair N, Kamble R, Shaikh S. Primary squamous cell carcinoma of the breast: A case report. Indian J Appl Basic Med Sci. 2014;16(22):14-18.

[5] Han Y, Wang J, Wang Z, Xu B. Clinicopathological characteristics and prognosis of squamous cell carcinoma of the breast: A population-based analysis. Cancer Control. 2021;28:10732748211044355. Doi: 10.1177/10732748211044355.

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