

## METAPLASTIC CARCINOMA OF BREAST- A CASE REPORT

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### ABSTRACT

#### BACKGROUND

Metaplastic Carcinoma of Breast are rare tumours with poor prognosis. The usual age group affected is 45-65 years. They are heterogenous tumours with carcinoma and metaplastic transformation into sarcoma.<sup>1</sup>

#### KEYWORDS

Metaplastic, Carcinoma, Sarcoma.

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#### BACKGROUND

Malignant tumours of breast constitute most common cancers among women particularly affecting middle age group and elderly. Infiltrating duct carcinomas (NOS) are the most common histological type. Metaplastic carcinoma is the one which shows sarcomatous transformation along with heterologous elements like cartilage, bone, skeletal muscle. The incidence is 0.5-2.5%. Majority of them would have metastasised by the time they are diagnosed in breast. The rate of recurrence, morbidity and mortality is more than that of IDC (NOS). This case report presents a challenging case of metaplastic breast carcinoma showing sarcomatous differentiation. Due to its rarity, I am presenting this case by highlighting the histopathological features.

#### Case Report

A 65-year-old post-menopausal woman came to the surgical OPD with a history of lump in left breast for last 3 months. Clinical examination revealed a hard mass measuring 4 X 3 cm. It was fixed to the underlying structures and skin. Fine needle aspiration cytology revealed features consistent with ductal carcinoma.

Modified radical mastectomy of left breast with axillary lymph node clearance was done and the specimen sent for histopathological examination. Grossly the specimen showed a grey white tumour measuring 5 X 4 X 3.5 cm with foci of areas of haemorrhage and necrosis. Axillary lymph nodes were dissected.

Microscopic examination showed the tumour comprising of infiltrating tumour cells with moderate cytoplasm. The nuclei were round to oval pleomorphic and hyperchromatic. Many typical and atypical mitoses noted with large areas of necrosis. Amidst these carcinoma cells were spindle cells arranged in fascicles running in varying directions. The nuclei were enlarged pleomorphic and hyperchromatic with frequent mitoses and areas of necrosis.

Foci showing chondroid and osseous metaplasia also noted. There was no evidence of metastasis in axillary lymph nodes. A diagnosis of metaplastic carcinoma grade 8 was made. Immunohistochemistry for ER and PR was negative, and vimentin was positive. Patient underwent postoperative radiotherapy. There was no evidence of recurrence for 3 months of followup period.

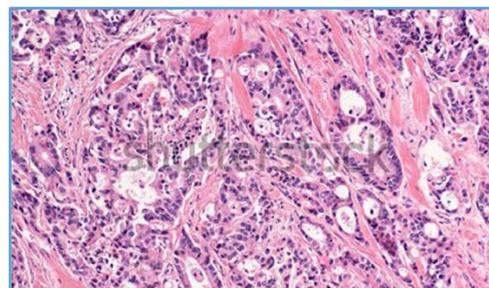


Figure 1. Showing Carcinoma

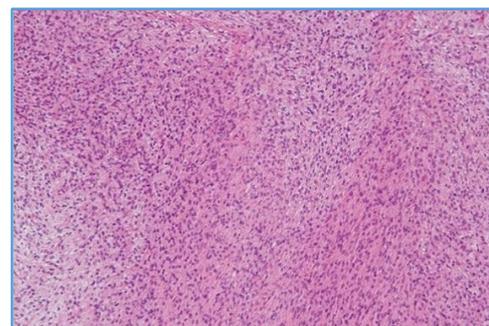


Figure 2. Showing Spindle Cells

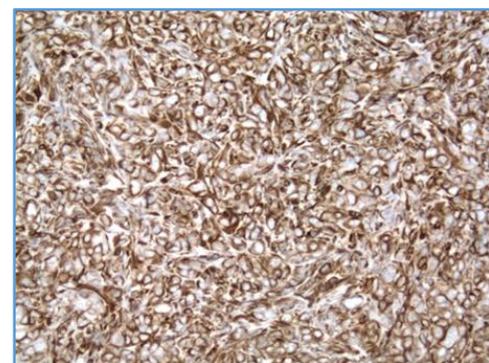


Figure 3. Vimentin Positive

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**DISCUSSION**

Metaplastic carcinoma of breast must have a neoplastic component that is either squamous or non-epithelial, may exhibit obviously malignant stroma composed of spindle cells and may be keratin positive.<sup>2</sup>

It is a rare malignant tumour accounting for less than 2.5% of all malignant tumours. This heterogenous group of tumours are characterised by an admixture of adenocarcinoma with areas of spindle cells, squamous cells and or mesenchymal differentiation like fibrosarcoma,<sup>3,4</sup> leiomyosarcoma and osteogenic sarcoma or it may be nonspecific.<sup>5</sup>

The WHO classified the subtypes as low grade adenosquamous carcinoma, fibromatosis like metaplastic carcinoma, squamous cell carcinoma, spindle cell carcinoma, carcinoma with mesenchymal differentiation, chondroid differentiation and osseous differentiation. In our case, the patient had carcinoma with spindle cell sarcomatous component. The age of the patient in our study was 65 years which is in accordance with the available literature saying it is seen in patients above 50 years of age. The incidence of axillary lymph node metastasis is less in various studies.<sup>5</sup>

Metaplastic carcinoma is usually negative for oestrogen and progesterone receptors and positive for vimentin which is also true in our case.<sup>5</sup>

**CONCLUSION**

The most common organ affected by carcinoma in females is breast. Metaplastic carcinoma needs special emphasis as it carries poor prognosis.

**REFERENCES**

- [1] Fletcher CD. Diagnostic histopathology of tumors. 2<sup>nd</sup> edn. London: Churchill Livingstone 2000; p. 900.
- [2] Beatty JD, Atwood M, Tickman R, et al. Metaplastic breast cancer: clinical significance. *Am J Surg* 2006;191(5):657-64.
- [3] Lee AH. Recent Development in the histological diagnosis of spindle cell carcinoma, fibromatosis and phyllodes tumor of the breast. *Histopathology* 2008;52(1):45-57.
- [4] Hoda SA, Brogi E, Koerner D, et al. Breast pathology. 4<sup>th</sup> edn. Philadelphia, PA: Lippincott Williams and Wilkins 2014.
- [5] Badve S, Dabbs DJ, Schnitt SJ, et al. Basal-like and triple negative breast cancers: a critical review with an emphasis on implications for pathologist and oncologists. *Mod Pathol* 2011;24(2):157-67.