Case Report

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Mammary metaplastic carcinoma: a very rare case with review of literature

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ABSTRACT

Metaplastic carcinoma of breast is a rare neoplasm. Although it is a tumor of ductal type, the predominant component may have an appearance other than the glandular pattern and usually runs an aggressive course. We report the case of a 36-year-old female patient with a left breast lump. Neither imaging nor fine needle aspiration biopsy was crucial in achieving a diagnosis. The patient underwent MRM with axillary clearance. In consideration of the lymph node status, the patient was subjected to radiotherapy and adjuvant chemotherapy. The patient has been disease free for 2 years now. Literature review has suggested metaplastic carcinoma of breast is rare neoplasm and diagnosis is difficult to make, hence should be managed aggressively with surgery followed by radiotherapy and adjuvant chemotherapy.

Keywords: Breast tumor, MaBreast lump, lignant tumor, Metaplastic

INTRODUCTION

Metaplastic carcinoma is a rare heterogeneous neoplasm generally characterized by a mixture of adenocarcinoma with dominant areas of spindle cells, squamous and / or other mesenchymal differentiation. The reported incidence is 0.2% of all breast cancers. It includes various categories such as sarcomatoid carcinoma, spindle cell carcinoma, carcinoma with osteoclast like giant cells, squamous cell carcinoma and others. We present a case report of 36 years old female diagnosed as mammary metaplastic carcinoma.

CASE REPORT

A 37 years old female presented with a lump in her left breast for last 8 months. She also complains of pain since 2 months. She gives history of weight loss along with history of loss of appetite. Her local examination revealed hard mobile lump involving in all the quadrants of left breast, tenderness was present along with nipple and

areola complex normal. There were multiple left axillary lymph node palpable. Right breast and axilla were normal (Figure 1 and 2).



Figure 1: Bilateral breast with left sided lump in breast.

Her ultrasonography left breast suggestive of malignant breast mass with malignant lymphadenopathy. Her Fine needle aspiration cytology from tumor mass suggestive of changes of fibroadenosis and biopsy was done to confirm the diagnosis. Left sided modified radical mastectomy along with left axillary dissection was performed and specimen was sent for the histopathology (Figure 3). Histopathological diagnosis of Metaplastic Carcinoma with high grade spindle cell component was made (Figure 4 and 5).

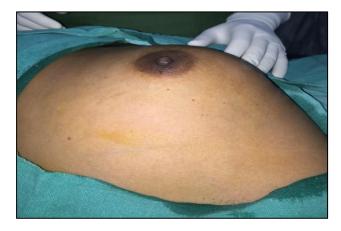


Figure 2: Left breast lump.

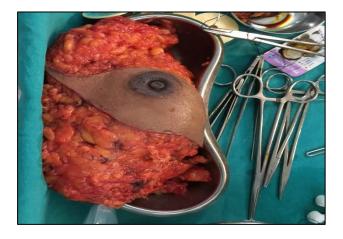


Figure 3: Resected left breast along with lump.

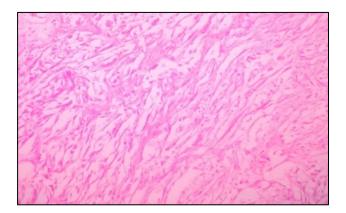


Figure 4: Neoplastic cells arranged in fascicles with long elongated spindle shaped cells.

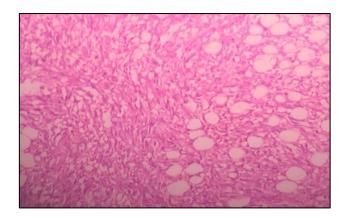


Figure 5: Metastasis of malignant cells in the lymph node.

Immunohistochemically the tumor cells were positive for pancytokeratin, epithelial membrane antigen and vimentin and negative for ER (estrogen receptors) and PR (progesterone receptors) and cerB2 oncoprotein. The patient received, six cycles of FEC (fluorouracil, epirubicin, and cyclophosphamide) combination chemotherapy with radiation therapy. Since then she is under our regular follow up and is disease free till date.

DISCUSSION

Metaplastic carcinoma is a rare tumor of breast consisting of intraductal or infiltrating carcinoma contagious or subtly merged with a highly cellular, mitotically active pleomorphic spindle cell stroma.3 Carcinomas showing extensive metaplastic change to squamous cells, spindle cells and heterologous mesenchymal elements are well recognized in breast.4 The diagnosis can be difficult to establish both on clinical and histopathological basis.² However, in most tumors areas of infiltrating ductal carcinoma even though small and focal are present with transition to metaplastic elements. The tumor shows varying proportions of carcinomatous pseudosarcomatous elements, as seen in the present case. The sarcoma like component may resemble malignant fibrous histiocytoma, chondrosarcoma, osteosarcoma, rhabdomyosarcoma or a combination of these.⁴ This tumor probably is derived from myoepithelial cells. The myoepithelial cell has been suggested as a link that can differentiate into epithelial as well as mesenchymal elements.⁵ The incidence of lymph nodal metastasis from metaplastic carcinoma is lower than infiltrating duct carcinoma. Purely spindled / sarcomatoid tumors have significant lower rate of nodal metastasis than conventional ductal and lobular carcinomas.6 The reported case differs from the previous case reports by Patrikar et al, is that it did not show any malignant squamous differentiation.² An aggressive course has been seen in metaplastic carcinomas -sarcomatoid type as compared to the matrix producing metaplastic carcinomas, which have a favorable course. Most metaplastic carcinomas are negative for ER and PR and HER 2/neu and are managed by radical mastectomy followed by radiation and chemotherapy. Immunohistochemistry is of particular value in evaluation of the tumors that lack evidence of carcinoma. The sarcoma like elements of these tumors may have acquired vimentin positivity and other features of mesenchymal nature (phenotypical switch), it is always possible to demonstrate epithelial markers (wide spectrum cytokeratin positivity) in at least occasional cells.⁷⁻⁹

CONCLUSION

Literature review has suggested metaplastic carcinoma of breast is rare neoplasm and diagnosis is difficult to make, hence should be managed aggressively with surgery followed by radiotherapy and adjuvant chemotherapy.

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