Original Resear	Volume - 12 Issue - 11 November - 2022 PRINT ISSN No. 2249 - 555X DOI : 10.36106/ijar Pathology INVASIVE BREAST CARCINOMA WITH MEDULLARY FEATURES AND HER2/NEU POSITIVITY: A RARE CASE STUDY.
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ABSTRACT Invasive breast carcinoma with medullary features is a rare variant of invasive ductal carcinoma. It accounts for <5% of invasive breast carcinomas. Despite its aggressive histopathological features, the prognosis is favourable. We are reporting a case in a 60 years female having a mass in the right breast for 8 months. Detailed history, routine investigations, radiological investigation, fine needle aspiration, histopathological examination and immunohistochemistry were performed. The final diagnosis of the case was given as Invasive Breast Carcinoma with medullary features and Her2/neu positive. TNM staging is T2N0M0. No lymphovascular invasion noted. We are reporting this case for being an uncommon finding.

KEYWORDS: Invasive breast carcinoma with medullary features, Immunohistochemistry, case report.

INTRODUCTION

Invasive breast carcinoma with medullary features is a rare variant of invasive ductal carcinoma (<5% of invasive breast carcinomas). Despite its aggressive histopathological features, it has favourable prognosis.¹² Medullary carcinomas typically lacks Estrogen receptor (ER) and Progesterone receptor (PR) expression, as well as Human epidermal growth factor receptor (HER2/neu) amplification; however, there are number of reports in literature that it can be ER, PR and/or HER2/neu positive, indicating heterogeneity of this type of breast carcinoma.^{23,5,6}

Here we report a case of invasive breast carcinoma with medullary features and HER2/neu positivity for being an uncommon finding.

CASE PRESENTATION

A 60 years female presented with a lump in the right breast for 8 months. Detailed history, routine investigations, radiological investigation and fine needle aspiration cytology were done.

On physical examination, the mass was 2.5cm×2.5cm in size, wellcircumscribed, firm in consistency and non-tender. All routine investigations were within normal limits. Ultrasonography of right breast revealed well defined hypoechoic lesion measuring 21mm×26mm in 6-70'clock position with increased internal vascularity. Opposite breast was normal.

Cytopathological examination of MGG stained smears show hypercellularity composed of pleomorphic cells arranged in sheets and clusters in a background of mixed inflammatory cells (Figure 1).

The patient underwent right mastectomy. Following mastectomy, histopathological examination and immunohistochemistry were performed. On gross examination of right mastectomy specimen with lymph nodes measures $12 \text{ cm} \times 10 \text{ cm} \times 7 \text{ cm}$. Cut sections shows a firm whitish well circumscribed mass measuring $2.5 \text{ cm} \times 3 \text{ cm} \times 3 \text{ cm}$. Nipple, areola and skin unremarkable (Figure 2).

Microscopically, syncytial growth pattern of pleomorphic cells separated by loose stroma infiltrated with lymphocytes and plasma cells with pushing borders (Figure 3: a, b). Lymph nodes are free from tumour cells. Immunohistochemically ER, PR are negative and HER2/neu shows strong membrane positivity (Figure 4).

The final diagnosis of the case was given as Invasive Breast Carcinoma with medullary features and Her2/neu positive. TNM staging is T2N0M0. No lymphovascular invasion noted.









Figure 3: a, b





DISCUSSION

Breast cancer is the most common cancer in women worldwide. Invasive breast carcinoma with medullary features accounts for less than 5% of invasive breast carcinomas.¹ They are almost invariably negative for hormone receptors as well as Her-2/neu ('triple negative' phenotype).³ In our case it was Her-2 neu positive and ER, PR negative. Recently, targeted therapies based on the genetic, hormonal, or immunohistochemical (IHC) subtypes of breast cancer have been used. Therefore, owing to different prognoses and treatment strategies, prior knowledge of molecular subtypes is essential to managing breast cancer patients.⁴ However, the treatment for medullary carcinoma,

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includes modified or radical mastectomy along with radiation or chemotherapy depending on the stage or histologic grade and they are known to have good prognosis.

CONCLUSION

Invasive breast carcinoma with medullary features is a unique but lessaggressive type of invasive ductal carcinoma. It is usually misdiagnosed clinically and grossly with fibroadenoma hence we should keep in mind this type of carcinoma in differential diagnosis of fibroadenoma. Clinicopathological diagnosis plays an important role in better management of these patients.

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