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# MEDULLARY CARCINOMA OF BREAST : A CASE REPORT

Pathology

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## ABSTRACT

A 50 years old female having single, large, well circumscribed mass in left breast since 7 months. Fine Needle Aspiration Cytology report was given as medullary carcinoma of breast which is further corfirmed after surgery of breast lump by histopathological report as Medullary carcinoma of breast. Immunohistochemistry showed Estrogen Receptor (ER), Progesteron Receptor (PR) negative and Her-2 neu positivity. We are presenting this case of medullary carcinoma of breast for being a specific histopathological subtype.

## KEYWORDS

Fine Needle Aspiration Cytology, Breast, Medullary Carcinoma, Immunohistochemistry

## INTRODUCTION

Medullary carcinoma of breast is uncommon variant of invasive ductal carcinoma, which constitutes about 5% of all breast cancer[1]. Medullary breast carcinoma is a unique histological subtype of breast cancer. The tumour has a significantly better prognosis than the usual infiltrating duct carcinoma, probably due to good host immune response in the form of lymphoid infiltrate in the tumour stroma. Histopathological features of this type of tumour has specific findings which play important role in final diagnosis and management.

## CASE REPORT

A 50 years old female presented with lump in upper outer quadrant of left breast since 7 months. On local examination a lump which was 6x4 cm in size, painless, soft to firm and mobile. Skin of nipple-areola were unremarkable. No significant contributory history was there. All routine investigations were within normal limits. Radiological examination of chest, pelvis and abdomen showed no evidence of metastasis.

Cytopathological evaluation showed cellular smears of malignant cells arranged in sheets and clusters admixed with mature lymphocytes and plasma cells. Cytopathological features suggestive of medullary carcinoma of left breast. Modified radical mastectomy of left breast was done and specimen was sent for histopathological examination.

## GROSS

We received a specimen of left modified radical mastectomy specimen with axillary clearance. MRM specimen on serial cut sections showed a tumour measuring 6x4.5x4 cm which was round, well circumscribed, grey white mass with pushing margins. Nipple, areola and skin were unremarkable.

## MICROSCOPIC EXAMINATION

Multiple sections from left MRM specimen showed large syncitial growth pattern of neoplastic cells separated by loose stroma. Neoplastic cells were large, round to oval having moderate pleomorphic, hyperchromatic or vesicular nuclei with prominent nucleoli and moderate amount of eosinophilic cytoplasm. Intervening stroma showed dense , diffuse lymphoplasmacytic infiltration. Tumour also shows lymphocytic infiltration. Frequent mitotic activity also noted. All eight axillary lymph nodes were free from metastasis. Final histopathological impression according to Bloom and Richardson criteria was given as medullary carcinoma breast grade II. Immunohistochemistry study showed estrogen and progestron receptor negative while Her-2 neu was positive.

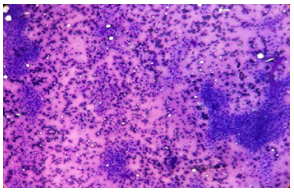

**Fig-1 Showing FNAC Smear - Medullary carcinoma breast**

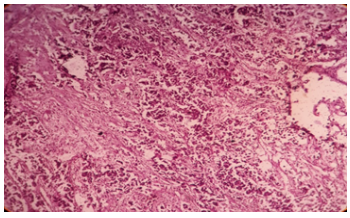

**Fig-2 Showing Histopathology- Medullary carcinoma breast**

## DISCUSSION

Medullary carcinoma of the breast demonstrates distinct pathological features, described in detail by Moore and Foote in 1949[2], with unique biological and clinical characteristics. Its clinicopathologic character has various implications that may dictate diagnostic and therapeutic approaches. Medullary carcinoma has been reported by some investigators to have a better prognosis than other histologic subtypes, particularly invasive ductal carcinoma[3-7]. Moore and Foote[2] have even stated that only 11.5% of their patients with medullary carcinoma died of the tumour within 5 years. Usually patients with medullary carcinoma present at a relatively younger age than the age of presentation of other breast cancers comparable as stated in a study by Rosen etal[8]. It was found to constitute 11% of all breast malignancies among women aged 35 years and younger. Clinically patients present with palpable breast lump, gradually increasing in size and usually at upper outer quadrant. Bilateral medullary carcinoma is noted in about 3-18% of cases[9]. In our case axillary adenopathy was noted, however it showed reactive change on microscopic examination with no evidence of metastasis.

Histopathological examination plays important role in diagnosis of tumor in medullary carcinoma. The criteria for diagnosis[10,11,12] are syncitial growth pattern cells in more than 75% of the tumor, B) admixed lymhoplasmacytic infiltrate ,C) microscopic circumscription ,D) nuclear grade of II or III, E) absence of glandular differentiation. In addition to various features on histopathology medullary carcinoma may be associated. Hemorrhage, cystic degeneration, various type of metaplasia (most often squamous metaplasia) and tumor necrosis[13]. It is stated that prominent inflammation associated with medullary carcinoma has better prognosis compare with that of without prominent inflammation[14]. The metastasis is low in cases of medullary carcinoma and ranges from 19-46%[14]. The patient managed with treatment of modified radical mastectomy along with radiotherapy and chemotherapy depending on stage and histopathologic grade. Medullary carcinoma has better survival rate as compared to infiltrating duct carcinoma of not otherwise specified type. The overall 5 year survival rate is approximately 78% for medullary carcinoma[15].

## CONCLUSION

Medullary breast carcinoma is a rare subtype of infiltrating ductal carcinoma which has high grade cytological features but has good prognosis as compared to invasive ductal carcinoma.

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