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## TRIPLE NEGATIVE APOCRINE CARCINOMA OF BREAST

Junior Sundresh., Gopikrishnan., Ashwin Muthukumar and Aravind Vimal

Department of Surgery, RMMCH, Chidambaram

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### ABSTRACT

Apocrine carcinoma of breast is rare and has a distinct morphological feature. It is diagnosed as separate distinct entity because of its different hormonal receptor profile, clinical behaviour and unique response to targeted therapy. A case of apocrine carcinoma of breast is discussed to underline the effective management of the patient.

#### Key words:

Ca Breast, TNBC, Mastectomy,  
Taxanes, Chemotherapy

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## INTRODUCTION

### Case

A 35 year old premenopausal female presented with complaints of breast lump for past 3 months in left side with history of discharge from nipple which was serous in nature and associated with a continuous not radiating pricking type of pain.

### Clinical Examination

Patient examined and a lump of size 5x3cms in upper outer quadrant of left breast was present, hard in consistency. The skin over the swelling was free and there was no chest wall fixity. Nipple and areola complex was normal. Examination of lymph nodes revealed enlarged central group of axillary nodes on the left side.



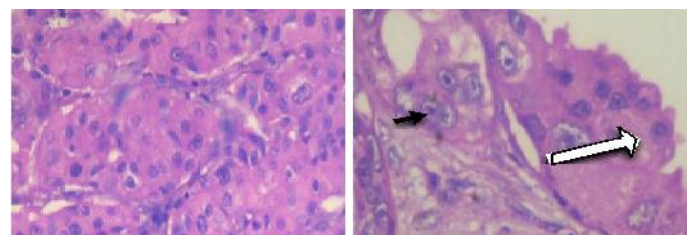
### Investigations

Ultrasonography of left breast performed which showed abnormal lesion corresponding to BIRADS-4 with enlarged level 1 and 2 axillary nodes on the left side. FNAC was done and reported as neoplastic lesion.

Metastatic work up was done by ordering computerised Tomography of chest and ultrasonography of abdomen and pelvis and was found to be normal. Clinical diagnosis of left carcinoma breast was made. Staging was found to be T2N2aM0. Patient underwent Auchincloss Left Modified Radical mastectomy with removal of level 1&2 nodes and specimen was sent for HPE.

### HPE Report

Revealed large polygonal tumour cells arranged in nests and sheets with abundant eosinophilic granular cytoplasm with pleomorphic vesicular nuclei and prominent nucleoli with sharp wall. Tumour cells were found in clusters with apocrine snouting.



Apocrine carcinoma with extensive intraductal component - mainly cribriform and comedo pattern.

Modified Bloom Richardson's grading system - Grade II. Score 6.



#### Immunohistochemistry

ER- Negative, PR- Positive, HER 2 NEU- Negative, AR- Positive

#### DISCUSSION

TNBC represents a challenge for patients and clinicians due to its poorer prognosis and fewer treatment options, with a lack of targeted use of therapies which are reflected with high mortality in comparison to other breast cancer subtypes. As regard surgery in TNBC and despite being more aggressive disease, surgical decision making likely rests on more traditional clinicopathological variables (like patient age, tumor size, and tumor grade) and patient preference.

As regard radiotherapy in TNBC, it is given traditionally as indicated in other breast cancer subtypes following mastectomy or CBS, but there is still some controversy on this issue. The controversy arises from the fact that TNBCs are rapidly growing and locally aggressive cancers that may represent a limit to the general principle saying that breast-conserving surgery followed by radiation therapy in early stage (T1-2N0) is equivalent to mastectomy. Also the general consensus that postmastectomy radiation therapy is not indicated for patients with node-negative tumors less than 5 cm in diameter should not oversimplified in TN tumors.

The therapeutic strategies for the management of TNBC are targeting DNA repair complex like (platinum compounds and taxanes), p53 like (taxanes), cell proliferation like (anthracycline containing regimen) and targeted therapy. Neoadjuvant chemotherapy studies have consistently reported higher RRs in TNBC than non-TNBC and pCR has been shown to predict improved long-term outcomes for TNBC.

The specific adjuvant regimens that may be most effective for TNBC are still being to be determined. Numerous large randomized trials have established the benefit of adjuvant anthracyclines and taxanes in breast cancer. All options are proposed in first-line treatment but the majority of recommendation indicated taxanes for first-line therapy while recommendations for second-line therapy were more commonly single agent capecitabine or combination of capecitabine and vinorelbine, or gemcitabine and vinorelbine or a platinum-based regimen. The most frequently recommended platinum-based regimens for first-line therapy and second-line is cisplatin plus gemcitabine, carboplatin plus paclitaxel and carboplatin plus gemcitabine.

Several targeted therapies are being successfully developed like Poly (ADP-ribose) polymerase-1 (PARP-1), which is a nuclear DNA-binding enzyme activated by DNA strand breaks and has a key role in the signaling of DNA single-strand breaks as part of the repair process. Initial exciting data suggesting that iniparib improved outcome in patients with TNBC in combination with chemotherapy have not been confirmed in phase III studies, although there are clearly patients who benefit from this agent.

Several other targeted agents are being developed in the setting of managing TNBC including epidermal growth factor receptor (EGFR), FGFR2, VEGF, and mTOR.

#### CONCLUSION

The diagnosis and treatment of apocrine carcinoma is a challenge. Further studies are needed to elucidate better treatment strategies for these types of patients. TNBC is an important area of research because (I) TNBC is a poor prognostic factor for disease-free survival (DFS) and overall survival (OS); (II) no effective specific targeted therapy is readily available for TNBC; (III) there is a clustering of TNBC cases in premenopausal women and in women of African descent; and (IV) the overlap of BRCA1-associated breast cancers with the TNBC phenotype is significant.

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