



“A CASE OF APOCRINE PAPILLARY CARCINOMA OF BREAST- A RARE PRESENTATION”

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ABSTRACT — Apocrine breast cancer is a rare type of invasive ductal breast cancer with 4% incidence.
 — We report a case of a 32 year female with apocrine papillary carcinoma managed at our hospital and discuss the criteria to diagnose and the various modalities of treatment and its prognosis.

KEYWORDS : apocrine papillary carcinoma, breast.

INTRODUCTION:

Apocrine breast cancer is a rare type of invasive ductal breast cancer (4%). Mostly affects women in their 60s and 70s. Like other types of invasive ductal cancer, apocrine breast cancer begins in the milk duct of the breast before spreading to the tissues around the duct. The cells that make up an apocrine tumor are different than those of typical ductal cancers.

When the cells of an apocrine tumor are examined under the microscope, they look like cells normally found in the sweat glands in the axillary and groin region. It is thought that the normal ductal breast cells have undergone metaplasia, to become more like apocrine cells, though it is not known exactly how or why this occurs.

Apocrine tumors are often “triple negative”, meaning that the cells do not express the estrogen receptor, progesterone receptor, or HER2 receptor. Apocrine tumor cells are almost always positive for an additional receptor called the *androgen receptor*.

Apocrine tumors, even when triple negative, are less likely to involve the lymph nodes. They are more responsive to treatment, and may have a better prognosis than more common types of invasive ductal cancer.

CASE REPORT:

A 33 year old female patient presented to our surgical op with chief complaint of lump in the left breast of one month duration. She was apparently asymptomatic one month back when she noticed the lump. There was only marginal increase in the size of the lump. It wasn't associated with pain, or discharge from the nipple. There was no history of trauma or recent retraction of nipple.

There was no significant past, medical, family, menstrual history. She had two children and both were breast fed.

General examination was unremarkable. Vitals were stable.

On local examination fullness in the left breast was evident but lump was not discretely identified on inspection. Nipple areolar complex was normal. There was no skin dimpling, orange, ulceration or sinus formation. With hands raised above skin dimpling was prominent and inframammary folds were normal. There was no fullness in left supraclavicular fossa.

On palpation there was no local rise of temperature or tenderness. A lump of size 7*6 cm was noted occupying central and outer upper and lower quadrants. It was firm in consistency and moving with the breast tissue, it had no independent mobility. All other inspeactory findings were confirmed. There was no fixity to skin or chest wall. Two discrete mobile lymph nodes were palpable in the left axilla central group. Arm and thorax was normal. Contralateral breast and axilla was normal.

Mammography was suggestive of large well defined thick walled cystic lesion measuring 59*42*80mm with intracystic hyperechoic vascular solid component measuring 41*23*55mm and thick

echogenic collection in the left breast sub areolar region and lateral quadrants was noted. BIRADS 4 category (Breast imaging reporting and data system). Fnc was suggestive of ductal cell atypia. Tumor was staged as T3N1M0.

Patient was posted for MRM and specimen was sent for HPE.

On HPE sections from large cyst with tumor shows features of encapsulated apocrine papillary carcinoma with papillary fronds and tubular shaped ducts with abundant eosinophilic cytoplasm. Nuclei shows pseudostratification with mild focal atypia. Rest of the breast shows features of fibrocystic disease.

LN shows reactive hyperplasia.

DISCUSSION:

Division of mammary cancer into various histologic types has been of interest to pathologists for many years [5]. Apocrine metaplasia characterized by finely granular, pale eosinophilic cytoplasm, and a tendency to apical budding of the cytoplasm is generally regarded as an indicator of low potential for a given lesion undergoing malignant transformation. The malignant transformation of this apocrine epithelium was first described by Krompecher in 1916 [5, 6].

The incidence of infiltrating apocrine carcinoma is unclear, as the definition and consequently the reported incidence vary considerably. Gayatri et al. included this entity under the group of “relatively rare carcinomas” [1]. Azzopardi reported an incidence of apocrine carcinoma between 0.3 and 0.4% of all breast carcinomas, Frable and Key reported 1%, Bonser et al. reported 14.5%, and Haagensen reported 62% [1, 4].

Apocrine carcinoma always shows moderate to marked nuclear pleomorphism and tubule formation is rarely greater than 75%. Mitotic count is variable (1–3). Therefore, most apocrine carcinomas are modified Scarff-Bloom-Richardson grade 2 or 3 [4]

Ongoing studies about apocrine carcinomas revealed gross cystic disease fluid protein-15 (GCDFFP-15) positivity on molecular analysis [3, 4]. Hormonal status of apocrine carcinomas is found to be basal-like triple negative breast cancer with androgen receptor positivity [3]. Apocrine carcinoma has a prognosis similar to IDC-NOS-type breast cancer, when matched for stage and grade [2]. Durham and Fechner [4] in 2000 discussed that one may question why apocrine carcinoma should be classified as a separate group if there are neither diagnostic nor prognostic differences between nonapocrine infiltrating adenocarcinomas and apocrine carcinomas. However, there seems to be a potential unique response to androgen (fluoxymesterone) administration as a part of treatment; that may justify identifying apocrine carcinoma as an entity different from usual ductal carcinoma, which was further emphasized by Tsutsumi [3], 2012, by demonstrating androgen receptor positivity, which may lead to different clinical behavior and management protocols. Based on this, our patient is put on hormonal therapy including androgen analogue.

CONCLUSION:

Apocrine carcinoma is a rare and distinct morphological type of invasive breast cancer. A thorough search should be done for malignancy before ruling out any apocrine metaplasia as benign. Further studies are needed to direct the treatment against androgen receptor.

REFERENCES:

1. G. Gayatri, B. Mondita, B. Asha, and A. Vishal, "Study on apocrine carcinoma of breast: histomorphologic features and immunohistochemical behavior," *International Journal of Basic and Applied Medical Sciences*, vol. 2, no. 3, pp. 190–193, 2012.
2. R. Yerushalmi, M. M. Hayes, and K. A. Gelmon, "Breast carcinoma—rare types: review of the literature," *Annals of Oncology*, vol. 20, no. 11, pp. 1763–1770, 2009.
3. Y. Tsutsumi, "Apocrine carcinoma as triple-negative breast cancer: novel definition of apocrine-type carcinoma as estrogen/progesterone receptor-negative and androgen receptor-positive invasive ductal carcinoma," *Japanese Journal of Clinical Oncology*, vol. 42, no. 5, pp. 375–386, 2012.
4. J. R. Durham and R. E. Fechner, "The histologic spectrum of apocrine lesions of the breast," *The American Journal of Clinical Pathology*, vol. 113, supplement 1, no. S3, p. S18, 2000.
5. W. J. Frable and S. Kay, "Carcinoma of the breast. Histologic and clinical features of apocrine tumors," *Cancer*, vol. 21, no. 4, pp. 756–763, 1968.
6. J. A. Mossler, T. K. Barton, and A. D. Brinkhous, "Apocrine differentiation in human mammary carcinoma," *Cancer*, vol. 46, no. 11, pp. 2463–2471, 1980.