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Solid Papillary Carcinoma of Breast: A Rare Case Report

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Abstract:*Solid papillary carcinoma of breast is rare variety of breast cancer. Here we report one such case of a 46 year female patient presented with painless lump in left breast. After provisional diagnosis of ductal carcinoma in fine needle aspiration cytology, the patient underwent modified radical mastectomy. On histopathology, diagnosis of solid papillary carcinoma of breast was made. The tumor was node negative and with strong ER & PR expression and Chromogranin A expression. Increasing awareness of this clinicopathologic entity would be helpful in proper diagnosis and formulating treatment plan.*

Key-words:*Solid Papillary Carcinoma, Estrogen and Progesterone Receptor, Neuroendocrine Markers.*

Key Messages: *Solid papillary carcinoma of breast is a rare entity. Judicious morphological examination is needed for its diagnosis. Positivity for hormone receptors is noted in this group of tumour and patients do have a really good prognosis.*

I. Introduction

Papillary lesions of the breast represent a complex group of lesions ranging from benign to malignant. Papillary breast cancer represents approximately 0.5% of the invasive breast cancers. [1] Among this group of lesions, solid papillary carcinoma (SPC) constitutes a distinct entity clinically and morphologically. It develops predominantly in elderly patients and clinically behaves as a mass-forming in situ carcinoma. They are low grade tumors originating from large or dilated ducts and composed of well-circumscribed solid nodules of monotonous neoplastic cells separated by a network of fibrovascular cores. [2] We herein report a case of solid papillary carcinoma of the breast.

II. Case History

A 46 year female patient presented with chief complaints of lump in the upper-inner quadrant of left breast for last 2 months. On general examination, she was found to be hypertensive but no other abnormality was detected. Her age of menarche was 14 years, age of marriage was 29 years and age of menopause was 42 years. She has one daughter. Her routine hematological and biochemical test parameters were within normal limit. On clinical examination of the left breast, a 3cmx3cm firm, mobile lump was found in the supero-medial quadrant. Overlying skin was free. Nipple was not retracted but serous discharge per nipple was present. No axillary lymph node on left side was palpable. Opposite breast and axilla were clinically normal. Mammography of left breast showed a round, high density mass in supero-medial quadrant. USG showed a mass in the same location measuring 2.98cmx2.71cm. FNAC from the tumour was performed and revealed a diagnosis of ductal carcinoma of breast. Following that, left modified radical mastectomy was done and the tissue was subjected to histopathological examination. Under microscope at low magnification, multiple circumscribed cellular masses were noticed. The cells were mostly arranged in homogenous and cohesive pattern. Some fibrovascular cores containing hyalinised collagen and surrounded by palisades of cells forming pseudorosette were seen[Figure 1]. On high power, the cells were monotonous, small in size and have hyperchromatic nuclei and scanty cytoplasm. Mitotic figures are present but less than 5-6 per 10 high-power field [Figure2]. Out of 19 lymph nodes dissected out, none showed any metastatic deposit. Bloom-Richardson Grade was 1 and TNM stage was $pT_2N_0M_X$. On IHC, both ER & PR were positive [Figure 3 & 4]. HER2/neu score was negative/ 1(+)[Figure 5]. The cells were shown to be reactive to Chromogranin-A [Figure 6].Ki-67 index was 10%[Figure 8]. Absence of peripheral myoepithelial cell was shown by lack of staining with P63 immunostain [Figure 7]. So, the diagnosis of solid papillary carcinoma breast was made.

III. Discussion

Solid papillary carcinoma is an uncommon lesion that affects primarily elderly women, with a mean age of 72 years in one series. Macroscopically, the tumors have a nodular configuration and are usually well-circumscribed, soft masses. When mucinous differentiation is present, a gelatinous appearance may be grossly appreciated. [3] Microscopically, these tumors appear as multiple nodules, each representing a duct filled by a neoplastic proliferation. Cells are ovoid or spindled, occasionally with a streaming appearance, similar to florid

ductal hyperplasia.[4] The cells grow in a solid pattern with intermingled fibrovascular network and no apparent papillary structures. Nuclear palisading around the stromal cores and pseudorosette formation around capillary vessels are also common features. Solid papillary carcinomas are composed of monotonous cells with a low to intermediate nuclear grade in the majority of cases. Cells frequently have plasmacytoid or endocrine appearance with eosinophilic, granular cytoplasm and eccentric nuclei. Sometimes spindle cells with nuclear grooves predominate. Rarely, signet ring morphology is seen. Mitotic figures are common; however, atypical mitoses are not present.[3] Solid papillary carcinomas are positive for estrogen and progesterone receptors and negative for HER2/neu. Proliferation index is low. Additionally, tumor cells are positive for neuroendocrine markers such as synaptophysin and chromogranin.[5]The differential diagnosis ranges from benign to malignant lesions including florid ductal hyperplasia, lobular neoplasia, intracystic papillary carcinoma (IPC), and ordinary low–nuclear-grade ductal carcinoma in situ (DCIS). On low magnification, the lesion may resemble florid ductal hyperplasia with spindle or ovoid cell morphology. However, florid ductal hyperplasia does not present with fibrovascular cores, palisading of cells, or mucin production. In addition, the presence of mitotic activity is not a characteristic of florid ductal hyperplasia. Lobular neoplasia or lobular carcinoma in situ can involve papillary lesions. Additionally, the plasmacytoid appearance of SPC cells is also a feature of lobular proliferations. However, lobular neoplasia is characterized by discohesion and lack of papillary fronds. Immunohistochemistry using e-cadherin, which is positive in SPC and negative in lobular proliferations, is very helpful in difficult case.[3] Intracystic papillary carcinoma may come into the differential diagnosis because it also presents in elderly patients, is well circumscribed, and may lack a layer of myoepithelial cells at the periphery. However, IPC is characterized by the presence of papillary fronds lined by cuboidal cells that often reveal higher–nuclear grade cytology. [6] In the absence of invasive carcinoma, SPCs have a favorable outcome. In cases associated with invasive carcinoma, the prognosis will depend upon the invasive component of the tumor. In these cases, distant metastasis can occur without axillary lymph node involvement.[4] Our case also corresponds with the above discussion as it occurred in a post-menopausal woman and histology showed a low grade node negative tumour with strong ER & PR expression.

References

[1]. Louwman MW, Vriezen M, van Beek MW, Nolthenius-Puylaert MC, van der Sangen MJ, Roumen RM, *et al*. Uncommon breast tumors in perspective: incidence, treatment and survival in the Netherlands. Int J Cancer 2007;121:127-35.

[2]. Maluf HM, Koerner FC. Solid papillary carcinoma of the breast. A form of intraductal carcinoma with endocrine differentiation frequently associated with mucinous carcinoma. Am J Surg Pathol 1995; 19:1237-44.

[3]. Nassar H. Solid Papillary Carcinoma of the Breast. Pathol Case Rev 2009;14:157–61.

[4]. Nassar H, Qureshi H, Adsay NV, Visscher D. Clinicopathologic analysis of solid papillary carcinoma of the breast and associated invasive carcinomas. Am J Surg Pathol 2006;30:501-

[5]. Rosen PP. Papillary Carcinoma. In: Rosen PP, editor. Rosen's Breast Pathology. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2009. p. 423-48.

[6]. Collins LC, Schnitt SJ.Papillary lesions of the breast: selected diagnostic and management issues. Histopathology 2008;52:20-9.

Pictures and legends

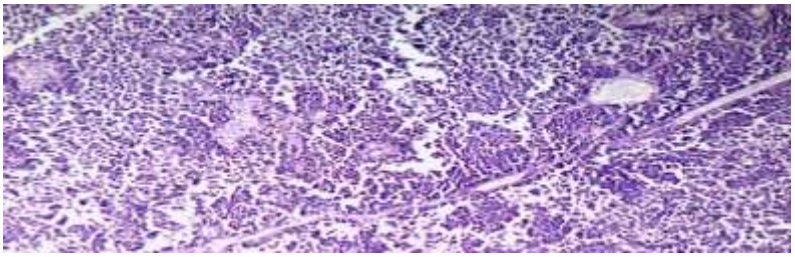

Fig 1. Homogenous and cohesively arranged cells with some fibrovascular cores and occasional pseudorossette(x100)

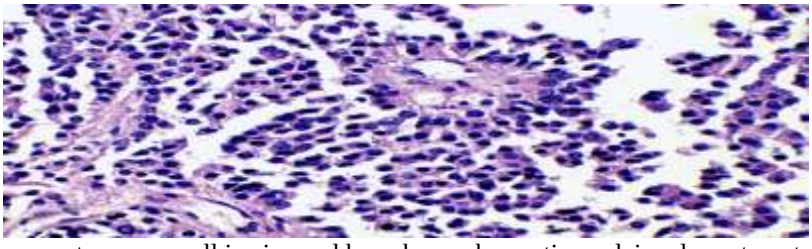

Fig 2. Cells are monotonous, small in size and have hyperchromatic nuclei and scanty cytoplasm (x400)

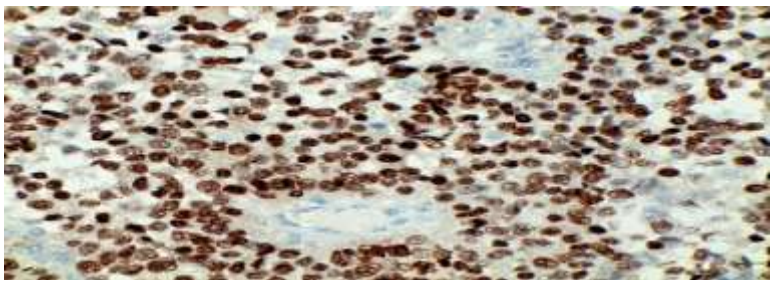

Fig 3.ER immunostaining was positive.

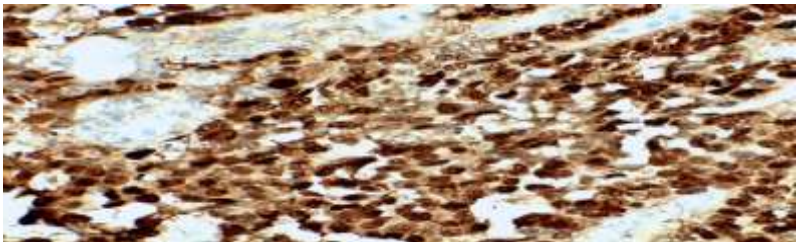

Fig 4.PR immunostaining was also positive.

Fig 5. Her2 score was 1(+)

Fig 6.The cells were shown to be reactive to Chromogranin-A

Fig 7. P63 staining was negative

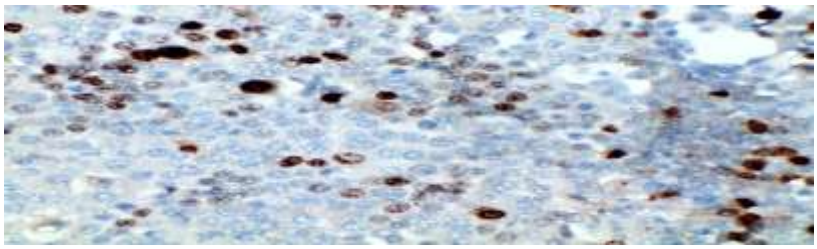

Fig 8. Ki 67 index-10%