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# INVASIVE CARCINOMA OF BREAST CRIBRIFORM TYPE ASSOCIATED WITH INTRACYSTIC PAPILLARY CARCINOMA WITH NODAL METASTASIS: A CASE REPORT

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**ABSTRACT** Invasive cribriform carcinoma (ICC) is a rare form of breast cancer.The incidence of ICC is reported to range from 0.5 to 3.5% .It is typically a low grade and slow growing cancer with a better outlook than most other types of invasive breast cancer.Cribriform breast cancer may be mixed with other types of breast cancer or it can be pure cribriform.Intracystic papillary carcinoma (IPC) is a variant of papillary carcinoma and accounts for 0.5-2 % of breast cancers.We report this case of invasive cribriform carcinoma of breast with associated intracystic papillary carcinoma with nodal metastasis in a 65 year old female who presented with a painless mass in the lower outer quadrant of left breast with axillary lymphadenopathy.Intracystic papillary carcinoma has an excellent prognosis in its pure form but the prognosis of a coexistent lesion such as ductal carcinoma in situ or invasive carcinoma may be less optimistic.

**KEYWORDS :** Breast, Invasive cribriform carcinoma ,Intracystic papillary carcinoma ,Prognosis .

## INTRODUCTION

Invasive cribriform carcinoma (ICC) is a unique type of invasive breast carcinoma that was first described by Page *et al* in 1983. The carcinoma is characterized by a cribriform pattern in the majority of its invasive component[1].Cases havebeen divided into pure, classical, and mixed forms of ICC[2,3]. The prognosis of patients with pure and classical ICC is excellent [4,5] .Intracystic papillary carcinoma (IPC) of the breast is an uncommon malignant breast neoplasm. It represents approximately 0.5% to 2% of all breast cancers and typically occurs in post-menopausal women[6].Pure intracystic papillary carcinomas have a slow growth rate and an excellent prognosis with a ten year survival approaching 100% [7] , but the recognition of a coexistent lesion such as a ductal carcinoma in situ or invasive carcinoma is very important for which careful pathological examination is essential.

Immunohistochemistry revealed positivity for ER , PR and negativity for HER 2/neu.

## CASE REPORT

A 65 years old female presented with a mass in the lower outer quadrant of left breast.On sonography the mass was heterogenous with solid and pinpoint cystic areas.Core biopsy of the mass revealed a diagnosis of suspected invasive carcinoma.After Modified Radical Mastectomy , grossly , there was a 5cm sized tumor, which was solid ,grey white, irregular with small cystic areas. A mural nodule within a cystic space was also noted.

## HISTOPATHOLOGY

Microscopy revealed cyst with intracystic proliferation of epithelial cells having papillary and cribriform architecture and formed by columnar to polygonal cells with hyperchromatic nucleus, vesicular chromatin and eosinophilic cytoplasm.Invasive cords and cribriform architecture noted. Desmoplasia noted in the invasive component.DCIS of flat and cribriform type noted. Lymphovascular invasion seen. Perineural invasion not seen.Nipple areola complex is free from tumor. Base is free from tumor.One out of twelve lymph nodes dissected out show features of metastatic carcinoma with perinodal extension.

Impression: Invasive carcinoma of breast Cribriform type associated with Intracystic Papillary carcinoma with nodal metastasis.

**Immunohistochemistry** revealed positivity for ER, PR and negativity for HER 2/neu.

**FIG 1 & 2- CRIBRIFORM PATTERN SHOWING INVASION. (H & E)**

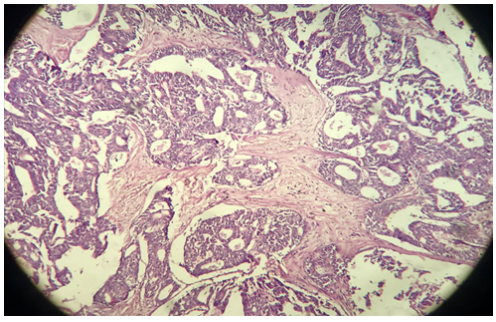

**FIG 1**

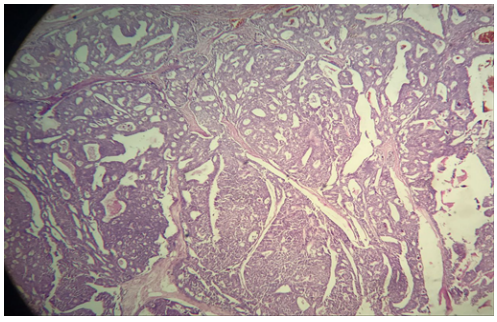

**FIG 2**

**FIG: 3 & 4- INTRACYSTIC PAPILLARY CARCINOMA COMPONENT. (H&E)**

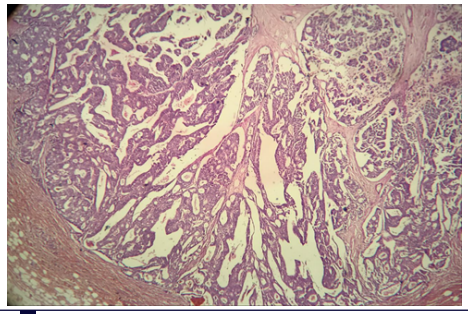

**FIG 3**

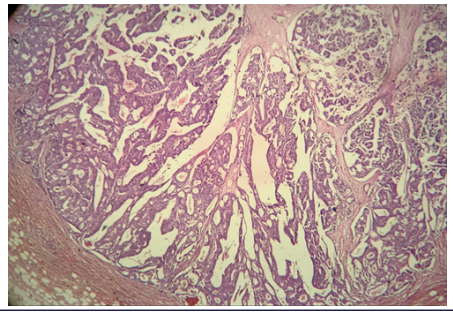

**FIG 4**

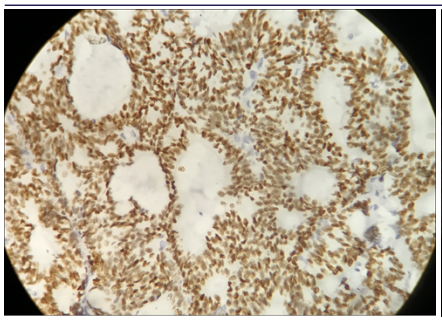

FIG 5: ER POSITIVE EXPRESSION

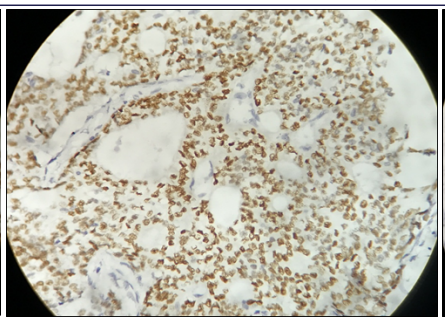

FIG 6: PR POSITIVE EXPRESSION

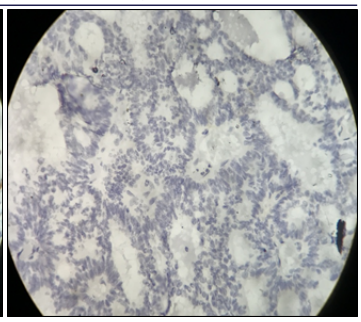

FIG 7: HER -2/neu NEGATIVE EXPRESSION

## DISCUSSION

The histological hallmark of Invasive cribriform carcinoma is a cribriform pattern in the majority of the invasive component [2,3]. Page et al. used the term ICC to describe breast carcinoma that exhibits a cribriform pattern in more than 50% of the invasive component and divided the condition into classical ICC and mixed ICC [1].Classical ICC consists of a tumor that exhibits an exclusively cribriform pattern or cribriform pattern with a limited extent of tubular invasive elements only, while mixed ICC contains areas of less well-differentiated invasive carcinoma [1]. ICC manifests a better prognosis than that of IDC. The 10-year overall survival rate for ICC is 90-100%, and the outcome of mixed ICC is reported to be less favorable than that of the pure form, but better than that of common ductal carcinoma [10].

Papillary carcinomas constitute less than 2% of breast carcinoma.It is mostly an insitu carcinoma ,namely "insitu papillary carcinoma" , but in a small group stromal invasion occurs, in which case the lesion is an " invasive papillary carcinoma".Histologically, whether insitu or invasive papillary carcinoma is further classified as " intraductal papillary carcinoma" when the duct simply expands to accommodate the proliferating lesion, " intracystic papillary carcinoma" if it becomes cystically dilated and " solid papillary carcinoma" when there are nodules formed by proliferating epithelial cells [12].

Intracystic papillary carcinoma is accepted as a borderline lesion in progression from insitu to invasive carcinoma because histologically there is scant or no MEC layer a situation similar to invasive carcinoma [11].

Invasive cribriform carcinoma must be distinguished from other invasive breast carcinomas that exhibit a cribriform pattern ,like adenoid cystic carcinoma (ACC) [1-4,9]. ACC may exhibit a cribriform pattern in some cases. However, the cribriform spaces in ACC lesions contain basement membrane material ,whereas the cribriform spaces in ICC lesions do not [8].ACC also contains basaloid cells (myoepithelium –like cells) in addition to glandular cells [2-3].

## CONCLUSION

Invasive Cribriform Carcinoma of the breast is a rare histological subtype of breast cancer ,with its unique characteristics, leading to good prognosis.

Intracystic papillary carcinoma is a rare breast malignancy, with an excellent prognosis in its pure form. These tumors often demonstrate a paucity of myoepithelial layer on immunohistochemistry or electron microscopy, raising the concern of a pushing border invasive carcinoma. The presence of an associated invasive component has a negative impact on the prognosis. The mainstay of treatment is surgical resection, with adjuvant therapy if associated with insitu or invasive carcinoma.

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