

# Invasive cribriform carcinoma of male breast- a rare case report

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## Abstract

Breast cancer in males are uncommon, accounting to less than 1% of all breast cancers and less than 1.5% of all malignancies in men. We report a case of 70 years old male patient who came with complaints of painless swelling in the left breast and axillary region. Patient was advised Fine needle aspiration cytology from the swelling in the left axillary region. Fine needle aspiration cytology from the left axillary region revealed metastatic carcinoma of breast. Modified radical mastectomy was done and the specimen was sent for histopathological examination. He was diagnosed to have invasive cribriform ductal carcinoma based on histology. Periodic Acid Schiff was done to differentiate it from other mimickers like adenoid cystic carcinoma and cribriform ductal carcinoma in situ. Male breast carcinoma is an uncommon entity. Subtyping is important to determine the prognosis. Invasive cribriform ductal carcinoma has a good prognosis after complete surgical removal. We are sending this case report of Invasive cribriform carcinoma of male breast for publication because of its rare occurrence.

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## INTRODUCTION

Breast cancer in male is relatively uncommon accounting for less than 1% and less than 1.5% of all malignancies in men.<sup>1</sup> In 1983, Page *et al* first described invasive cribriform breast carcinoma.<sup>2</sup>The incidence of invasive cribriform carcinoma is 0.08-3.5% of all invasive carcinoma of breast.<sup>3</sup>Recent epidemiologic studies suggest that the incidence of male breast carcinoma has been increasing in the recent years due to various factors. Invasive cribriform carcinoma is a well differentiated

variant of ductal carcinoma and has a favorable prognosis than the other types of breast carcinomas.

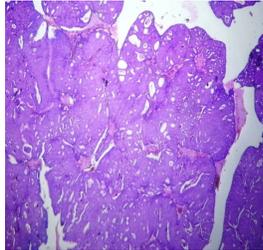
## CASE HISTORY

A 70 years old male patient came with the complaints of painless swelling in the left side of chest with surface ulceration and swelling in the axillary region for 4 years .On examination, a large hard swelling measuring 12x8 cms was seen in the left breast with overlying skin showing ulceration and the mass was seen fixed to the underlying tissue. Other side was normal. Left sided axillary region revealed a mass measuring 2x1.5cm, firm to hard in consistency. Fine needle aspiration cytology from the left axillary region mass showed metastatic carcinoma of breast. The patient underwent left modified radical mastectomy with removal of level I and II lymph nodes.

## PATHOLOGICAL FINDINGS

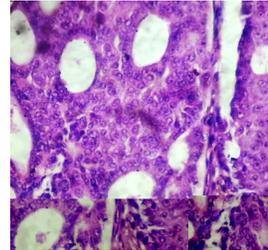
The modified radical mastectomy specimen with axillary tail measures 14x13.5x8.5 cm with overlying skin alone measuring 10.5x12.5 cm. Grossly, tumor appeared

infiltrating the skin with ulcer measuring 3.5x1.5 cm. Cut section of mass showed predominantly solid areas and few cystic areas. 5 lymph nodes were identified in the axillary pad of fat. Microscopically, tumor showed cells arranged in cribriform pattern. Individual tumor cells were round to oval with minimal amount of eosinophilic cytoplasm and moderate degree of nuclear pleomorphism.



**Figure 1:** Low power view of haphazard distribution of irregular invasive islands of tumour cells

One mitotic figure/high power field was seen. Tumor cells are seen infiltrating up to the dermis. No other patterns like tubular were seen. Two out the five lymph node showed metastasis. Periodic acid Schiff was done to see for basement membrane like material which was negative in this case and Immunohistochemistry was used to differentiate it from the other types.



**Figure 2:** High power view showing cribriform pattern with well defined spaces formed by arches of tumour cells

## DISCUSSION

Male breast carcinoma is relatively uncommon than the female breast cancer. Etiological factors for male breast carcinoma have been studied and showed that increased estrogen level is one of the main causative factor.<sup>4</sup> Other important factor is obesity which increases peripheral aromatization of estrogens which leads to hypererogenic level.<sup>5</sup> Our patient was also obese. Other causes include liver diseases, klinefelter syndrome, positive family history, gynecomastia.<sup>6</sup> Invasive Cribriform Carcinoma of breast is a special type of invasive carcinoma of breast accounting to the incidence of 0.08-3.5% of invasive breast carcinoma and was described in 1983 by Page *et al.*<sup>7,8</sup> In a study conducted by Ana M. Burga *et al.*, one case of invasive cribriform carcinoma was reported out of 778 cases of male breast carcinoma accounting to 0.13 percent.<sup>9</sup> They are mainly classified into three major types Classical, Mixed and Pure variants of invasive cribriform carcinoma. This classification of invasive cribriform carcinoma is mainly based on percentage of cribriform pattern which should be around 90% of the tumor mass.<sup>10,11</sup> these tumors are positive for estrogen and progesterone with Her2 Neu negativity.<sup>12</sup> our case has been diagnosed as classical variant of invasive cribriform carcinoma. The peculiarity of this carcinoma is that it has a very good prognosis compared to other types of breast carcinomas despite its lymph node involvement. In Page's original series of observation there was no mortality up to 14.5 years of follow up.<sup>1</sup> 100% 5 year survival rate of this condition was confirmed by other study.<sup>13</sup> It is important to differentiate this tumor from other mimickers like Adenoid cystic carcinoma, cribriform ductal carcinoma in situ and not special type of breast carcinoma with cribriform pattern because prognosis varies in each type, with a very good prognosis

for invasive cribriform carcinoma. Adenoid cystic carcinoma is differentiated from Invasive cribriform carcinoma with special stain like Periodic acid Schiff. Periodic acid Schiff staining in adenoid cystic carcinoma shows basement membrane like material positivity and it shows estrogen receptor and progesterone receptor negativity whereas in our case Periodic acid Schiff did not show any basement membrane like material positivity.<sup>14</sup> Cribriform ductal carcinoma in situ has normal ductal and lobular architectural arrangement compared to invasive cribriform carcinoma which was absent in our case.<sup>10</sup> Non Specific Type shows greater than 50% non cribriform pattern which was also not seen in this case. To conclude Invasive cribriform carcinoma is a special entity with good prognosis and 5 year survival rate.

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