



# A RARE CASE REPORT OF 70 YEAR OLD MALE WITH MALE BREAST CARCINOMA AND ITS FINE NEEDLE ASPIRATION CYTOLOGY FINDINGS

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## Abstract

Breast cancer in men is rare, and it accounts for about 1% of all malignant breast neoplasm cases. The estimated incidence is 1 case for each 1,00,000 men. Among the histologic types, invasive ductal carcinoma is the most prevalent breast cancer in males. Male breast cancer has unimodal age-frequency distribution with a peak incidence at 71 years old. Conversely, female breast cancer has a bimodal age-frequency distribution with early-onset and late-onset peak incidences at 52 and 72 years old, respectively. Genetic research on men has revealed that the majority of hereditary breast cancers are caused solely by germline BRCA2 mutations. Here, we present a rare case of 70 year old male patient diagnosed with ductal carcinoma of right breast. We report this case because of its rarity.

**Keywords:** Male breast cancer, Ductal carcinoma

## Introduction

Breast cancer in men is rare, and it accounts for about 1% of all malignant breast neoplasm cases<sup>[1,2]</sup>. The estimated incidence is 1 case for each 1,00,000 men<sup>[1,2]</sup>. Among the histologic types, invasive ductal carcinoma is the most prevalent breast cancer in males, with an incidence varying from 65 to 95%<sup>[2,3]</sup>. Male breast cancer has unimodal age-frequency distribution with a peak incidence at 71 years old. Conversely, female breast cancer has a bimodal age-frequency distribution with early-onset and late-onset peak incidences at 52 and 72 years old, respectively<sup>[4]</sup>. The incidence of this disease has increased during the past few years, along with the prevalence of female breast cancer<sup>[5]</sup>. This variation is caused by the population's genetic vulnerability, although genetic research on men has revealed that the majority of hereditary breast cancers are caused solely by germline BRCA2 mutations<sup>[6,7]</sup>. Here, we present a rare case of 70 year old male patient diagnosed with ductal carcinoma of right breast. We report this case because of its rarity.

## Case Presentation

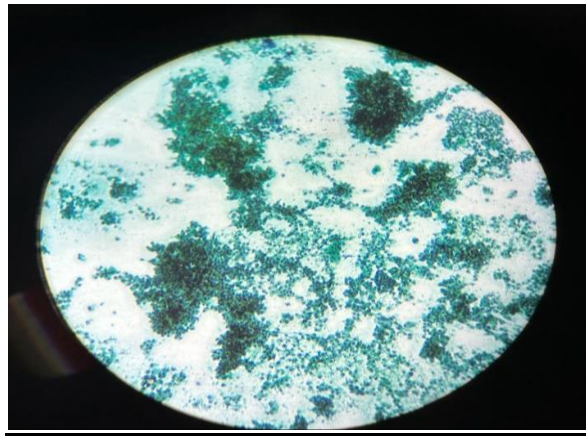
A 70-year-old blind male, who had no major prior medical history, arrived at outdoor patient department of DGH, SBKS MI & RC, Waghodia, Gujarat, with complaints of mass/swelling overnight part of chest for 4 years (Figure 1) which had increased over the past 2 months and was associated with pain and tingling sensation. Patient was chronic bidi smoker since past 25 years but had not been smoking since past 8 years. Family history is unremarkable. He was a farmer from Madhya Pradesh. Initially, he had pustule like lesion on the right side of the chest which eventually developed into a bigger mass for which he had gone to a local hospital where he was referred to our hospital for treatment due to his pain and tingling sensation. The patient was admitted to the oncology ward. Ultrasonography findings of this patient was an ill defined well marginated heterogeneously hypoechoic lesion of size 3 x 7 x 9 cm is noted in right breast region giving significant interval vascularity on color doppler suggestive of neoplastic etiology – Malignant lesion likely.

On examination, it was noted that the swelling was 8x6 cm over the right side of the chest with nipple retraction present, overlying skin over the mass was warm with no itching or ulceration with active discharge/bleeding. Fine Needle Aspiration Biopsy of this patient was done which showed Smears to be richly cellular, showed malignant ductal epithelial cells arranged in loosely cohesive clusters as well as singly scattered (+2). Individual cells showed mild pleomorphism (+2), nuclear size was 3-4 times the size of RBC (+2), indistinct nucleoli (+1), smooth nuclear margin (+1) with granular chromatin in the background of hemorrhage. Apocrine metaplasia was observed. The final diagnosis given was Right sided malignant breast lesion and Robinson score-10, Grade 1- Ductal Carcinoma. (Figure 2,3,4,5)

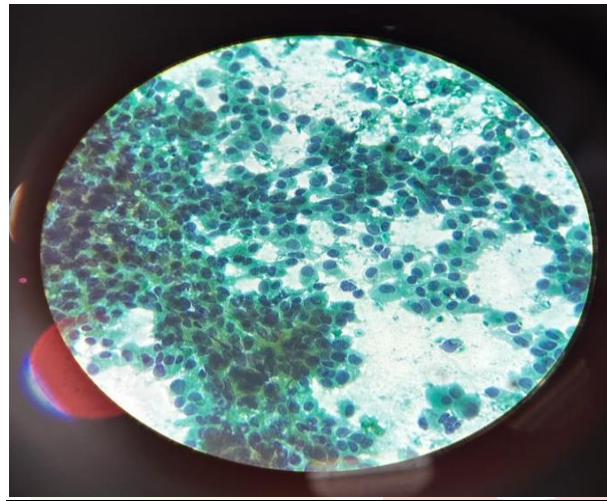
**Figure 1: A swelling over right chest**



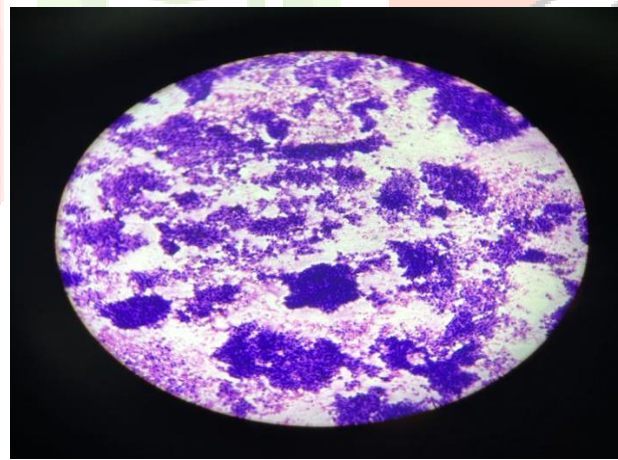
**Figure 2: Papanicolaou stain at 10x**



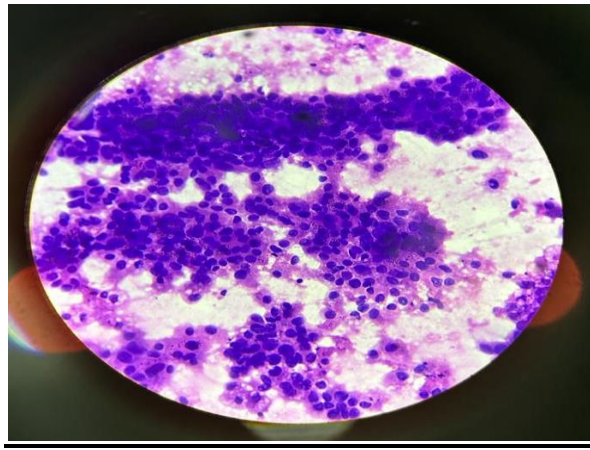
**Figure 3: Papanicolaou stain at 40x**



**Figure 4: H & E stain at 10x**



**Figure 5: H & E stain at 40x**



### Robinson Scoring System

Features	Score 1	Score 2	Score 3
Dissociation	Cell in clusters	Single, with cell clusters	Mostly single cells
Nuclear size	1–2×RBC size	3–4×RBC size	≥5×RBC size
Cell uniformity	Monomorphic	Mildly pleomorphic	Highly pleomorphic
Nucleoli	Indistinct	Noticeable	Prominent/abnormal
Nuclear margins	Smooth	Folds	Clefts/buds
Chromatin	Vesicular	Granular	Clumped and cleared
Grade 1: 6-11; Grade 2: 12-14; Grade 3: 15-18			

## Discussion

It is important to identify any relevant genetic or environmental risk factors when considering the etiology of male breast cancer. It is also crucial to keep in mind that the majority of men with MBC have no known risk factors. When examining the genesis of male breast cancer, it is crucial to take into account the changes in estrogen to androgen ratios. Similar to women, estrogen, which promotes ductal growth in the breasts, has been linked to male breast cancer as a potential risk factor. Klinefelter syndrome may increase the risk of male breast cancer by overstimulating estrogen. Obesity, marijuana usage, hepatic dysfunction, thyroid disease, and estrogen-containing drugs are additional possible factors that have been noted. A decrease in circulating androgens would result in elevations of the estrogen ratios, and this may occur from conditions such as cryptorchidism, orchitis, and orchiectomy.

## Conclusion

Male breast cancer incidence suggests that the disease is not as rare as previously thought. The hormone receptor appears to be more frequently positive in male breast cancer, and males with the BRCA2 mutation are significantly more at risk<sup>[6,7]</sup>.

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