

Retrospective Analysis of Male Breast Cancer from a Tertiary Center in South India

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Abstract

Background: Male breast cancer is a rare disease. It accounts for 1% of all malignancies in men and <1% of all breast cancers. The objective of this study is to analyze the clinical and pathological pattern and treatment outcome of male breast cancer.

Materials and Methods: Retrospective analysis of eight male breast cancer patients treated from January 2014 to January 2018 was done. Age group, stage, performance status, and clinical features were analyzed.

Results: Male breast cancer constitutes 0.8% of total breast cancer cases seen in our center. Median age at presentation was 55 years. Five patients (62.5%) had left-sided cancer and three (37.5%) had right-sided cancer. All patients presented with lump in breast. Infiltrative ductal carcinoma was the histopathology in all cases. Three (37.5%) had Grade 2 and five (62.5%) had Grade 3 tumors. Three patients (37.5%) were estrogen receptor (ER), progesterone receptor (PR) positive, and human epidermal growth factor receptor 2 (HER 2) NEU negative; 3 (37.5) were ER, HER 2 NEU negative, and PR positive; and 2 (25%) were ER, PR, and HER 2 NEU positive. Two patients (25%) presented in Stage II, 4 (50%) in Stage III, and 2 (25%) in Stage IV. Three patients (37.5%) had comorbid conditions such as diabetes and hypertension. Three patients (37.5%) underwent modified radical mastectomy upfront, 3 (37.5%) received neoadjuvant chemotherapy (CT) followed by surgery, and remaining 2 (25%) received palliative CT. All patients received anthracycline- and taxane-based CT.

Conclusion: Breast cancer constitutes 0.8% of all breast cancers seen in this center. Median age was 55 years. The left-sided cancers were more common than right and most of the patients presented in Stage III.

Key words: Clinicopathological characteristics, Male breast cancer, Management

INTRODUCTION

Male breast cancer is a rare disease. It constitutes 1% of all malignancies in men and <1% of all breast cancers.^[1,2] It is usually a disease of elderly men and seen in the 6th or 7th decade. Most of the patients present in advanced stage and the prognosis is poor. The epidemiological data of male breast cancer are meager due to rarity of the disease.

The reason of the low incidence rate in men is the relatively low amount of breast tissue along with the difference in their hormonal environment. Even though breast tissue is less in men as compared to women, the factors that influence malignant changes are similar.

Men are approximately as likely to be diagnosed with breast cancer as to develop chronic myelogenous leukemia. Because robust clinical evidence is lacking, treatment standards for men have generally been extrapolated from the enormous literature and clinical experience in women. However, these data may not be entirely applicable to men. The male hormonal milieu may be a unique and powerful determinant of risk, prognosis, and treatment outcome. Moreover, gender differences may affect patient preferences, toxic effects from therapies, and survivorship priorities.^[3]

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The standard treatment for early stage male breast cancer is surgery followed by adjuvant endocrine treatment, chemotherapy (CT), or radiotherapy depending on prognostic factors, which is the same as in women.

Aim

In this study, we have analyzed the pattern of presentation and clinical features of patients with male breast cancer.

MATERIALS AND METHODS

Retrospective analysis of eight male breast cancer patients treated from January 2014 to January 2018 was done. Age group, stage, performance status, and clinical features were analyzed.

All patients with histopathological documentation of infiltrative ductal carcinoma were included. All patients were staged with AJCC staging system (7th edition). Staging investigations were biopsy, CT chest, and CT abdomen and pelvis with contrast and bone scan.

RESULTS

Male breast cancer constitutes 0.8% of total breast cancer cases seen in our center. A total of eight male patients with breast cancer were registered between January 2014 and January 2018. Median age at presentation is 55 years (range 37–70). Three patients (37.5%) had comorbid conditions such as diabetes and hypertension [Table 1].

Five patients (62.5%) had left-sided cancer and 3 (37.5%) had right-sided cancer. All patients presented with lump in breast. Infiltrative ductal carcinoma was the histopathology in all cases. Three (37.5%) had Grade 2 and 5 (62.5%) had Grade 3 tumors. Three patients (37.5%) were estrogen receptor (ER), progesterone receptor (PR) positive, and human epidermal growth factor receptor 2 (HER 2) NEU negative; 3 (37.5) were ER, HER 2 NEU negative, and PR positive; and 2 (25%) were ER, PR, and HER 2 NEU positive. Two patients (25%) presented in Stage II, 4 (50%) in Stage III, and 2 (25%) in Stage IV [Table 2].

Three patients (37.5%) underwent modified radical mastectomy upfront, 3 (37.5%) received neoadjuvant CT followed by surgery and remaining 2 (25%) received palliative CT. All patients received anthracycline- and taxane-based CT.

Table 1: Patient characteristics

Clinical characteristics	Details and number of patients (%)
Age	
Median age (range 37–70)	55
Symptoms	
Lump skin ulceration	8 (100) 3 (37.5)
Comorbidities	3 (37.5)

Table 2: Tumor characteristics

Characteristics	Frequency (%)
Histopathologic grade	
Grade 1	0 (0)
Grade 2	3 (37.5)
Grade 3	5 (62.5)
Hormone receptor status	
ER+ve and PR+ve and HER -ve	3 (37.5)
ER-ve and PR+ve and HER -ve	3 (37.5)
ER+ve and PR+ve and HER 2 NEU +ve	2 (25%)
Tumor site	
Right	3 (37.5)
Left	5 (62.5)
Stage	
Stage I	0 (0)
Stage II	2 (25)
Stage III	4 (50)
Stage IV	2 (25)

ER: Estrogen receptor, PR: Progesterone receptor, HER 2: Human epidermal growth factor receptor 2

DISCUSSION

The incidence of male breast cancer in the center is 0.8% which is consistent with the incidence of other studies.^[4,5] Male breast cancer is usually seen in elderly population. The median age at presentation in our study is 55 years. Most of our patients presented with palpable lump. Skin involvement was seen in three patients. The left-sided disease was more common in this study.

Similar to female breast cancer (FBC), all the male breast cancers were infiltrating ductal carcinoma. Majority of our patients presented in advanced stage. It is due to lack of awareness and meager breast tissue compared to FBC. Most of our patients had lymph node positive disease as seen in other studies.^[6,7]

Male breast cancers are usually hormone positive. In our studies, all the patients had hormone positive disease. Five patients were ER positive and patients were HER 2 NEU positive.

Male breast cancers have worse prognosis compared to females because of older age at presentation and advanced stage. Male patients are frequently at a higher age than FBC at diagnosis (5–10 years older) and at a higher stage.^[8,9]

The staging of the disease during presentation is as follows on the basis of the tumor-node-metastasis (TNM) system presented by the largest case series in the literature: Stage I: 37%, Stage II: 21%, Stage III: 33%, and Stage IV: 9%.^[10,11] While the period between disease onset and diagnosis was 29 months in the past, this period has been reduced to 6 months in the newer series.^[12,13] It is evident that the disease is diagnosed at more advanced stages in men as compared to women. In fact, more than 40% of the patients are already at Stage 3 or 4 when they present to the clinic. The lesser amount of breast tissue in men also results in the involvement of chest wall at an early stage. For that reason, it has also been stated that the TNM may not be appropriate for men.^[14]

CONCLUSION

Male breast cancer is a rare disease and usually present in older age group and in advanced stage. More prospective studies are required to understand the clinical spectrum and management of this disease.

Limitation

Limitation of this study is that it is retrospective study.

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