Factors Associated with Delayed Presentation among Women with Breast Cancer

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Purpose: Breast cancer in women is one of the most common tumors in women worldwide. Throughout Pakistan, there have been multiple reasons that cause a delay in the presentation of breast cancer and many reasons are neither reported nor studied. The objective of our study is to provide detailed estimates on the prevalence and causes of delays in order to plan targets for intervention**.**
Materials Methods: This is a Quasi-Experimental study done at Department of General surgery, Shaheed Benazir Bhutto Medical College, Lyari Karachi from September 2018 to August 2020. We recorded the histories of 200 women by conducting structured interviews after their written consent and noted their mean age, standard deviation, early symptoms, and reasons for delayed presentation. Only patients who discovered their symptoms are included in the study.We then conducted the analysis on early and advanced stage patients using SPSS Version 20.
Results: The mean patient's age was 44.2 ± 4.13years, where 200 females were observed with a maximum age of 70 years and minimum age of 20 years in our data. Approximately 49% of breast cancers were advanced stage and about 69% had a rural residence, while painless bump was observed in 91% of women,hospital distance was less and more than 60 minutes and that's has hindered presentation too. Similarly, about 71.2% of breast cancer patients presented with

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advanced-stage disease. We observed the most common factor to be a painless lump and misdiagnosed first visit.

Conclusion: Our study concludes that distance, rural residence, painless breast lump, and misdiagnosis are the most common reason of delay presentation by the patients and should be intervened.

Keywords: Breast cancer; delayed presentation; mammography; early and advanced stage.

1. INTRODUCTION

Every year about 522,000 women die due to breast cancer worldwide and has become a dominant cause of death rate in women [1]. Breast cancer is known to occur when cells in the breast go out of control and the most common of all cancers is invasive ductal carcinoma however other common kinds include Paget's disease, external icon medullary, mucinous, and inflammatory breast cancer. It has become a growing social problem in many communities as the global incidence has increased to about 12.5% (i.e. one out of 8 women) suffer from it [2].

Due to the high mortality rate in women, diagnostic procedures are of prime importance for breast cancers because many people visit for consultations in advance stages of the disease. Many people present late due to fear of cancer, educational background or lack of support from family and friends and some don't have access to medical facilities [3]. Breast cancer is examined by a visual inspection with patients sitting upright and changes in nipples, asymmetry, skin dimpling, erythema, and obvious masses are noted in the patient. Therefore, the aim of this study the factors associated with delayed presentation among women with breast cancer so that strategies may be formulated to screen the patients timely in order to prevent ailments.

2. MATERIALS AND METHODS

The detailed study was conducted in General surgery, Shaheed Benazir Bhutto Medical College, Lyari Karachi, and a total of 200 women with breast cancer from September 2018 to August 2020 were included in the study. Further to this, patients with pathologically confirmed breast cancer were included in the study. (self-discovered only). We collected the data using personal interviews before and after surgery from patients after taking written consent from each patient. Data about sociodemographic and socioeconomic factors, health behavior, medical history, past mammograms, family history, etc.

was asked and recorded. Patients' first indication of breast lumps, pain discharge, and change of breast shape or size was discussed and noted too. Finally, we compiled the data and noted the mean age, age brackets, standard deviation, follow-up records, and factor of delay details. All the data was utilized to analyze the results statistically by SPSS Version 20.

3. RESULTS

In our results, a total of 200 females were diagnosed with breast cancers with mean age (SD) of 44.2year (13.96). Table 1 We observed that majority of the women about 19% were falling in the age bracket of 32- to 37-year-old. In contrast, the maximum and minimum age noted were 70 and 20 years old, respectively.After screening by mammography, about 51% were at an early stage and 49% were at an advanced stage of cancer.

About 45% of patients were employed and 56% were unemployed and 81% were married out of which 68% were earning below 20,000 and 16% were earning between 10k to 20k while 17% were earning above 20k monthly. It was also observed that patients that got diagnosed at an early stage were 51% and 49% had reached the advanced stage of cancer. We also noticed that patients with comorbidities were 88%. Patients who were from a rural residence were 1.0 times more likely to be in their advanced stage than the women residing in urban areas. Amongst the notable factor of delayed presentation, the presence of painless breast lump was approximately in 91% of patients with 1.02 times likely to be at an early stage at presentation. (Table 2).

A distance greater than 60 minutes from hospitals to patients'residences was associated with 45% of advanced-stage breast cancer patients while only 3% showed advance stage symptoms with distance less than 60 minutes.Some of the patients with the delayed presentation were the ones who were misdiagnosed at the first visit making 91% of

cases altogether with 46% in early and 45% in advanced stages of cancer.It was also noted that patients who delayed more than 3 months in the presentation have 56% cancers while women who presented within or less than 3 months have 20% advanced stage cancers only (Table 2).

4. DISCUSSION

Women with breast cancer are known to cause delay's in presentation and it has led to second stage cancers and difficulty in survival worldwide.[4]It's observed that especially poorly developed countries have reported long delays [4-5]. In our study, the women presenting with breast cancer have a mean age (SD) of 44.2year (13.96) and the majority about 19% of the women were falling in the age bracket of 32 to 37

years old with a maximum and minimum age of 70 and 20 years old.Elsewhere the mean age was 48.1 with 77% of women falling in above 40 years old age bracket [6].

Another study conductedby Nasrin and colleagues reported a mean age of 43.7 years with the maximum age of 71 and minimum age of 14 years and most women fell in the age bracket of 40 to 60 in her study While Bariati et al., patients aged above 59 were 50% in his study [3,7]. In our study, we found that 56% of patients reported a delay of more than 3 months and about 28% were at the early stage and 29% at the advanced stage while in Germany, the UK, and Columbia about 17% of patients reported similar delay [8].

Table 1. Demographics of patients

Demographics	Variable	Total Population
	Mean Age ± SD	44.2± 13.96
	Max	70
	Min	20
	Gender , No (%)	Female: 200 (100%)

Characteristics of Patients

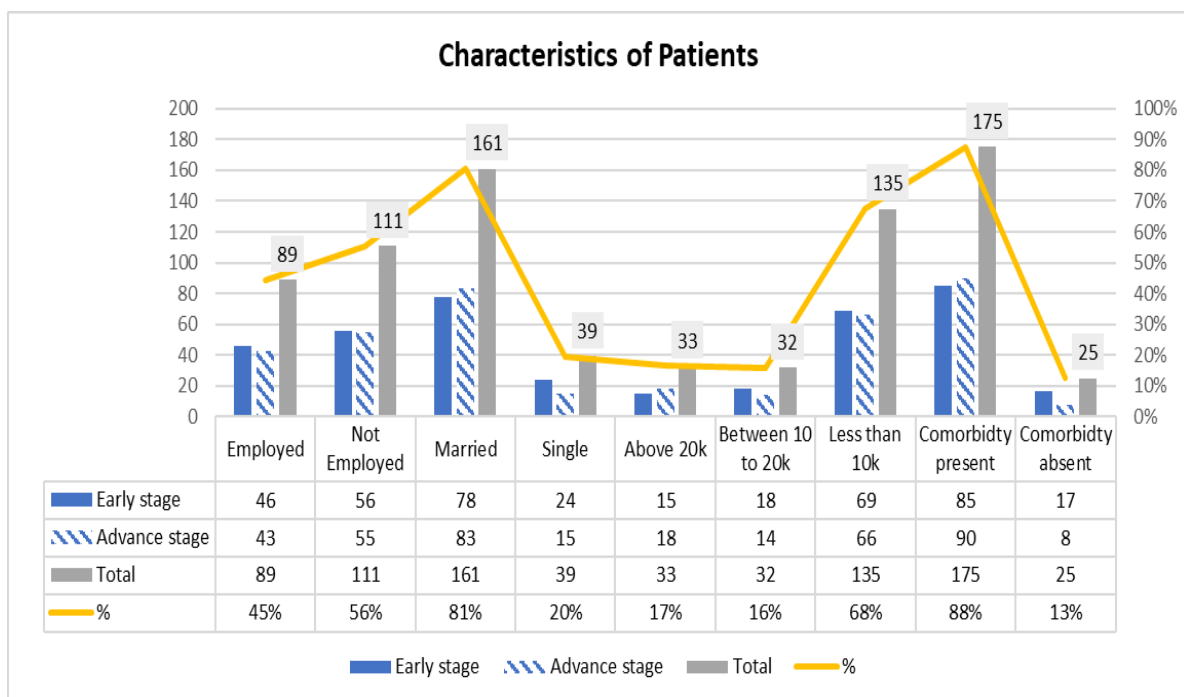|	Employed	Not Employed	Married	Single	Above 20k	Between 10 to 20k	Less than 10k	Comorbidty present	Comorbidty absent
Early stage	46	56	78	24	15	18	69	85	17
Advance stage	43	55	83	15	18	14	66	90	8
Total	89	111	161	39	33	32	135	175	25
%	45%	56%	81%	20%	17%	16%	68%	88%	13%

Fig. 1. Characteristics of patients with breast cancer

Table 2. Factors associated with delayed presentation

Fatcors for Delayed Presentation	Stages at Diagnosis	
	Early	Advance
Employment Status		
Employed	46	43
Not employed	56	55
Time to Presentation		
Less than 3 months	47	40
More than 3 months	55	57
Family Income		
Above 20k	15	18
between 10 to 20k	18	14
less than 10k	69	66
Hospital Distance		
> 60 minutes	5	93
< 60 minutes	97	5
Painless Breast Lump		
yes	92	90
No	10	8
Misdiagnosed at First Visit		
No	10	8
Yes	92	90
Home Residence		
rural	66	71
urban	36	27

Combining similar studies will give us a percentage bracket of 19% to 32% patients delay presentation of symptoms. However, is noticed that patient delay can vary from place to place which could be either because of patients' health or social conditions also. Thus, we can say breast cancer symptoms evaluation is dependent on personal and social factors which could range from negative experiences at diagnosis to family habits of utilizing healthcare facilities. Similarly, we also found that 91% of patients showed delay in presentation because they were misdiagnosed the first time and according to a study in Africa, misinterpretation remained a big reason there too [9]. In previous literature it was noted that women who were from rural areas were 4-times more likely to cause a delay in presentation than urban residence women while in our study it was 2 times more delay was observed in rural women than urban women [10,11].

5. CONCLUSION

Our study concludes that distance,rural residence, painless breast lump, and misdiagnosis are the most common reason of delay presentation by the patients and should be intervened. However, we need to conduct focused awareness programs for the public in the country to avoid the crucial progress to advance stage breast cancers.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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