A CROSS SECTIONAL STUDY OF REASONS FOR DELAY IN SEEKING HEALTH CARE IN BREAST CANCER PATIENTS

General Surgery

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ABSTRACT

Background: To improve the breast cancer care, better understanding of causes for treatment delay are important issues.
Aim & objectives: To study delay in seeking health care in breast cancer patients.
Methodology: Descriptive study in a tertiary care hospital during May 2013 to June 2014. Study participants were histo-pathologically confirmed 110 female patients of breast cancer.
Results: Median duration of first health care consultation for breast complaints was 4 months (1-24 months). Median duration of definitive diagnosis was 7 days (2-270 days). Total 62(56.36%) cases reported to the doctor after 3 months of delay. Most common reason for delay in seeking health care was no pain present in 53(85.48%). SES, stage of disease and tumor size were significantly associated with delay in seeking health care. Delay in the diagnosis was present in 16(14.55%).
Conclusion: Majority of cases reported in advanced stage of disease.

KEYWORDS

Cancer, Delay, Ses, Advanced Stage.

INTRODUCTION

Nearly all breast cancer cases are clinically detected in India with the majority presenting with locally advanced disease. Nearly one-third of breast cancer patients have skin/chest wall involvement at the time of diagnosis and the stage at diagnosis is often worse in younger patients. A later stage at diagnosis and lower survival have been linked to poor access to health care facilities and lower awareness, especially in the urban poor and rural populations as well as demographic factors such as lower education and literacy. There are multiple factors that delay diagnosis in Indian women, ranging from limited availability and access to cancer health services, lower health literacy and a social stigma attached to breast cancer. In a recent systematic review of published studies confirmed that delays of 3-6 months between the onset of symptoms and institution of treatment have been clearly found to reduce the survival rate of breast cancer patients.[1] Different studies have been conducted to know the causes of delay in seeking heath care and diagnosis of breast cancer.

Breast cancer awareness programs are more concentrated in the cities and have not reached the remote and rural parts of the country.[2, 3] Women often do not present for medical care early enough due to various reasons such as illiteracy, lack of awareness, and financial constraints. It is hardly surprising that the majority of breast cancer patients in India are still treated at locally advanced and metastatic stages.[2, 4] There are inherent factors that causes late presentation of breast cancer patients to a hospital. It is important to identify these factors in order to bring down the incidence, morbidity and mortality due to this disease.[5] To improve the breast cancer care, better understanding of the predicting factors and causes for treatment delay are important issues. Delayed presentation of breast cancer is associated with advanced stage and low survival.[6]

This study reviewed the breast cancer patients at a tertiary care hospital with respect to their socio-demographic characteristics and the factors that contributed to the delayed presentation of patients.

AIM & OBJECTIVES:

- To study the factors responsible for delay in seeking health care in breast cancer patients.

MATERIAL AND METHODS:

The present study was conducted to study various factors responsible for delay in seeking health care in breast cancer patients.

Study design: A cross sectional study.

Study setting:
A tertiary care hospital and medical college in central India.

Study duration: May 2013 to June 2014.

Study participants:
Histo-pathologically diagnosed breast cancer patients from surgery OPD and IPD.

Delay in seeking health care:
If the period between recognition of first symptom and first health care consultation was more than 3 months it was considered as delay in seeking health care.[1]

Delay in diagnosis:
If the period from first health care consultation for breast complaints to definitive diagnosis was more than 2 months, it was considered as delay in diagnosis.[1]

Statistical analysis:
Data analysis was done by using statistical software Microsoft office excel 2013 and Epi info 7.1.4, 2014.

Descriptive analysis was done by using percentages. Factors for delay were analyzed by using chi square test. P value < 0.05 was taken as statistically significant.

RESULTS

Total 110 study subjects were included in the study. The response rate was 100%. The salient observations of the study are given in following tables.

DELAY IN SEEKING HEALTH CARE
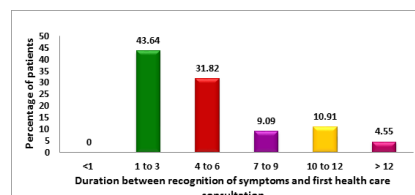
Figure 1: Distribution of patients according to duration between recognition of symptoms and first health care consultation

Out of 110 cases, none reported within one month of noticing symptom. 48(43.64%) cases had consulted the doctor between 1-3 months after noticing the symptom. Remaining 62(56.36%) cases reported to the doctor after 3 months of delay. Among them 35(31.82%) cases reported within 4-6 months, 10(9.09%) cases reported 7-9 months after noticing the symptom, 12(10.91%) cases

reported after 10-12 months and 5(4.55%) cases took medical help after 12 months of noticing the initial symptom.

The median duration of first health care consultation for breast complaints was the time between the onset of first symptom to the first health care consultation. It was 4 months (ranging between 1 to 24 months).

The median duration of diagnosis was the time between first health care consultation to the definitive diagnosis. It was 7 days (ranging between 2 to 270 days).

Delay of more than 3 months was present in 62(56.36%) cases whereas it was absent in 48 (43.63%) cases.

Table 1: Distribution of cases according to reasons for delay in seeking health care

Reasons for delay in seeking health care	Cases (n = 62*)	
	No.	%
No pain	53	85.48
Symptoms not considered as serious	41	62.12
Ignorance	37	59.67
Financial problems	29	46.77
Unawareness about disease	21	33.87
Other priorities	18	29.03
Fear of treatment	7	11.29

* Delay in seeking health care was found in 62 patients.

Table 2: Association between delay in seeking health care & Socio-demographic variables

Socio demographic variables	Delay present (n = 62)		Delay absent (n = 48)		p value
	No.	%	No.	%	
Age					t = 1.275, df = 108
Mean age ± SD	49.95 ± 12.13	47.02 ± 11.72			p = 0.2049
Socio-economic status*					χ^2= 8.410
II	1	1.62	8	16.67	df= 3
III	11	17.73	7	14.58	p= 0.0383
IV	33	53.23	20	41.67	
V	17	27.42	13	27.08	
Total	62	100.00	48	100.00	
Religion					χ^2= 0.8307
Hindu	42	67.74	31	16.67	df= 2
Muslim	11	17.74	07	14.58	p= 0.6601
Buddha	09	14.52	10	20.83	
Total	62	100.00	48	100.00	
Place of residence					χ^2= 0.0035
Urban	41	66.13	32	66.67	df= 1
Rural	21	33.87	16	33.33	p= 0.9528
Total	62	100.00	48	100.00	

* None of the cases belonged to SES class I.

No significant difference was found between the mean age, religion and place of residence of patients with delay and that in the patients without delay.

Statistically significant difference was found between socioeconomic status of two groups (χ^2= 8.410, df = 3, p = 0.0383).

No statistically significant difference was found with respect to religion (χ^2 = 0.8307, df= 2, p= 0.6601) and place of residence (χ^2 = 0.0035, df= 1, p= 0.9528).

Table 3: Association between delay in seeking health care & clinical variables

Clinical variables	Delay present (n = 62)		Delay absent (n = 48)		P value
	No.	%	No.	%	
Stage of disease*					χ^2 = 20.63
I	2	3.33	2	4.26	df= 3
II	12	20.00	28	59.57	p= 0.0001
III	31	51.67	15	31.91	
IV	15	25.00	2	4.26	
Total	60	100.00	47	100.00	
Tumor size**					χ^2 = 38.01
< 2 cm	2	3.33	1	2.13	df= 2
2 – 5 cm	7	11.67	31	65.96	p= < 0.0001
> 5 cm	51	85.00	15	31.91	
Total	60	100.00	47	100.00	
Nodal involvement					χ^2 = 2.73
Yes	51	82.26	33	68.75	df= 1
No	11	17.74	15	31.25	p= 0.0982
Total	62	100.00	48	100.00	

* Staging could not be assessed in three patients two from delayer group and one from non-delayer group.

** Tumor size could not be assessed in three patients two from delayer group and one from non-delayer group.

Table 3 shows association of delay in seeking health care and clinical variables. More cases were having higher stage of disease in the group with delay than group without delay and this difference was statistically highly significant (χ^2= 20.63, df= 3, p= 0.0001).

More cases with delay [51 (85.00%)] had tumour size > 5 cm than cases without delay [15 (31.91%)]. This difference was statistically significant (χ^2= 38.01, df= 2, p< 0.0001).

Similarly, nodal involvement was present in 51 (82.26%) cases with delay and in 33 (68.75%) cases without delay. This difference was statistically non-significant (χ^2= 2.73, df= 1, p= 0.0982).

Delay in the diagnosis:
Among 110 cases delay in diagnosis was present in 16 (14.55%) whereas it was absent in 94 (85.45%).

Among 16 cases who had delay in diagnosis, in 9 (56.25%) cases cancer was not diagnosed by the private practitioner, whom they consulted first. In 3 (18.75%) cases the condition was wrongly diagnosed as benign and treated accordingly. In 4 (25.00%) cases even though the treating physician suspected the breast cancer fine needle aspiration cytology (FNAC) did not diagnosed the cancer.

DISCUSSION:
DELAY IN SEEKING HEALTH CARE
In our study, out of 110 cases, 48 (43.64%) cases had consulted the doctor within 3 months after noticing the symptom. Remaining 62 (56.46%) cases reported to the doctor after 3 months of delay. The median duration of health care consultation was 4 months.

This finding is comparable with other studies like, **Richards MA et al (1999)**[7] found delay in 32% of patients, **Montazeri A et al (2003)**[8] found delay of > 3 months in 25% of patients, **Kumari PBVR et al (2011)**[9] found delay > 12 weeks in 37.9% of patients, **Earmah Ermiah et al (2012)**[6] found delay of > 3 months in 70% of patients.

However the extent of patient delay can be different in different places. One explanation for such a difference might relate to the patients' health related behaviors and the social context they live in.

Association of delay in with Socio-demographic and clinical variables

Age
The study did not demonstrate any association between age and delay. This was comparable with findings of **Tartter PI et al (1999)**[11] and **Chintamani at al (2011)**[1].

Studies have shown that older age is associated with patient delay as in, **Richard MA et al (1999)**[7], **Kumari PBVR et al (2011)**[9] and **Eramah Ermiah et al (2012)**[6].

We suspect that the small number of cases in the reference category might attenuate a statistical significance.

Place of residence
In our study out of 62 cases with delay 41 (66.13%) were from urban area and 21 (33.87%) were from rural area, whereas among 48 cases without delay 32 (66.67%) were from urban area and 16 (33.33%) were from rural area. The difference was non-significant. **Chintamani et al (2011)**[1] reported that rural background was found to be significant factor leading to delay in reporting to qualified doctor.

Education
No association was found between level of education and delay in consultation. This is comparable with findings of **Kumari PBVR et al (2011)**[9].

In contrast, **Chintamani et al (2011)**[1] and **Eramah Ermiah et al (2012)**[6] found significant association of delay with education.

Socioeconomic status
Statistically significant difference was found between socioeconomic status of two groups (x^2 = 8.410, df = 3, p = 0.0383).

Kumari PBVR et al (2011)[9] also noted that there was a significant association between social class and the delay (p < 0.001). Those with lower socioeconomic status are more liable to delay in presentation.

Stage of disease, Tumor size and Nodal involvement
Like other studies the findings in our study indicated that those who presented late had significantly advanced stage of the disease (p = 0.0001) and bigger tumor size (p < 0.0001).

The influence of delay on tumor size and disease stage is well documented by **Tartter PI et al (1999)**[10], **Montazeri A et al (2003)**[8], who found that delay of more than three months was significantly associated with advanced disease (P = 0.01), and bigger tumor size (P = 0.004). However, nodal status did not show significant results.

Eramah Ermiah et al (2012)[6] found that delay is significantly associated with advanced stage of the disease (p < 0.0001), large tumour size (p < 0.0001) and positive lymph nodes (p < 0.0001).

Reasons for delay in seeking health care
In all 110 cases lump was the first symptom noticed by the women themselves accidentally. Out of them, 62 patients had delay of 3 months or more in seeking healthcare. There were multiple reasons for delaying the consultation to doctor like, in 53 (85.48%) patients lump was painless, in 41 (62.12%) patients symptoms were not considered as serious, 37 (59.67%) ignored the symptoms, 29 (46.77%) had some financial problems, 21 (33.87%) were unaware of the cancerous nature of the disease and poor knowledge about breast cancer, 18 (29.03%) delayed health seeking because of other priorities like family responsibilities, education of their children, family functions, job responsibilities or other family problems. and 7 (11.29%) delayed the consultation because of fear of surgical treatment. These findings were in consistence with **Macleod U et al (2009)**[11], **Norsa'adah B et al (2011)**[12], **Chintamani et al (2011)**[1], **Akhtar M et al (2011)**[13], **Ermiah E et al (2012)**[6] and **Rastad H et al (2012)**[14].

Delay in Diagnosis
Delay in diagnosis was considered if the time lag between first heath care consultation of women and definitive diagnosis was more than 60 days.[1,10]

Among 110 patients delay in diagnosis was present in 16 (14.55%) cases. Out of which, in 9 (56.25%) cases the private practitioner whom they consulted first did not diagnosed the cancer and gave alternate treatment. In 3 (18.75%) cases the lump was diagnosed as benign and after lumpectomy it was found to be malignant on histopathology report. Thus diagnosis of cancer was delayed. In 4 (25.00%) cases though the treating surgeon suspected the lump as cancer fine needle aspiration cytology (FNAC) was non diagnostic. The lump was diagnosed as cancer after true cut biopsy which delayed the diagnosis. These findings were consistent with **Burgess CC et al (1998)**[15], **Tartter PI et al (1999)**[10], **Chintamani et al (2011)**[1], **Akhtar M et al (2011)**[13].

CONCLUSION:
Delay of more than 3 months is significantly associated with advanced stage of disease and larger tumor size.

RECOMMENDATIONS:
Health education and importance of self breast examination should be given to reduce the delay and diagnose the patient at early stage.

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