

Original Research Article

Locally advanced breast cancer: an observational study for the delay in presentation of patients

Priti Shah, Maitreyee Save*, Reina Khadilkar, Pranjal Shah,
Hanaa Kader, Mridula Eswarawaka

Department of Surgery, Dr. D. Y. Patil Vidyapeeth, Pimpri Pune, Maharashtra, India

Received: 14 June 2019

Revised: 16 December 2019

Accepted: 13 January 2020

***Correspondence:**

Dr. Maitreyee Save,

E-mail: save.maitreyee@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Breast cancer is the most common cause of cancer in women and cancer related mortality all over the world. There is strong evidence that delayed diagnosis of breast cancer is associated with poor survival. At our center most of the patients with breast cancer presented as locally advanced breast cancer (LABC) which drew our attention to find out the reasons of delay and its association with different socio-demographic variables.

Methods: We enrolled 50 histologically proven cases of LABC in this study. With help of semi structured interview, questions were asked from each patient which could reflect their understanding about the disease to find likely reasons for their delayed presentation, including socioeconomic status.

Results: In present study most of our patients were more than 45 years, married. 88% presented late due to unawareness and ignorance about nature and severity of breast cancer disease, 86% had financial issues, 64% had shyness as reason, 20% wasted time by taking alternative treatment, 52% presented late due to painless lump; 30% had fear of losing breast, 18% didn't get support from family, 4% presented late due to other reasons.

Conclusions: Awareness and knowledge of breast cancer was found to be poor amongst sufferers prior to their diagnosis, making it important reason for delayed presentation. Other significant factors being socioeconomic status and education. The need for increased awareness and use of screening practices was identified to be essential for early diagnosis of the disease and for improved outcomes.

Keywords: Breast cancer, Delayed presentation, LABC

INTRODUCTION

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death worldwide among females, accounting for 23% of the total cancer cases and 14% of cancer deaths.¹

The incidence of breast cancer has historically been higher in the developed world, but there has been a recent sharp increase in incidence and mortality in the developing world as well.² An important determinant of long-term survival of women with breast cancer is the

stage of the disease at the time of presentation. There has been a fall in death caused by breast cancer in western population as a result of breast screening, early diagnosis and better treatment. Attempts to control breast cancer deaths have, therefore relied on promoting early cancer detection and treatment as delay in seeking medical attention after discovery of a breast symptom is an important problem.²

In India, breast cancer remains a major cause of death among all cancer in women due to delay in diagnosis, hence we need to understand the factors influencing

diagnostic delay and form a strategy to encourage early detection and diagnosis of breast cancer in order to deliver prompt treatment and improve outcome. A meta-analysis of 12 studies on delay reported that 34.2% (range 9.9-56.0%) of subjects (total=8781) delayed more than 3 months. Personal and social variables such as: symptom attribution, beliefs and attitudes, the nature of symptoms, health awareness, personality characteristics socio-demographic factors and ethnicity, may all determine when women present with symptoms and when treatment begins.³

We therefore studied comprehensively the reasons that lead to delay in presentation in all symptomatic referrals to our institute. The concept of the study was based on our observations during our routine clinical practice. It is written for publication with intent to draw the attention of relevant stakeholders in our region for early detection and better prognosis.

The main objectives of this study were to determine the chief causes of delayed presentation of breast cancer patients and the association of delayed presentation with age, family history, marital, menopausal, education and socioeconomic status.

METHODS

The study was a longitudinal descriptive study conducted in general surgery department of Dr. D. Y. Patil Medical College, Pimpri, Pune which is a tertiary care private hospital. We enrolled 50 patients who were admitted to our hospital with locally advanced breast cancer (LABC) for treatment in 6 months duration from June 2018 to December 2018. Stage at diagnosis was based on classification for clinical staging of breast cancer outlined in the American joint committee on cancer staging manual. Recurrence and second primary cases were excluded.

Ethical committee approval was obtained for the study from the institutional ethics committee prior to commencement of the study.

All the demographic data for age, sex, socioeconomic status, level of education, duration of symptoms, any visit to doctor for this ailment and discussion of this illness with family members was collected using a predesigned proforma. Direct one to one interviews based on a predesigned proforma were performed to collect the specific reason for delayed presentation. Written informed consent was obtained and patients were assured that the information obtained from them will be kept confidential and they had a right to withdraw from the study without submitting any reason. Eight questions were asked from each patient which could reflect their understanding about the disease and which could be the likely reasons of their delayed presentation; questions were selected after review of the literature and keeping in view our social culture. The questions were 1. Did you

present late because you were not aware/ ignorant about the possibility of it being breast cancer? 2. Were you aware about screening method for breast cancer detection? 3. Did you present late because you were using alternative medicines at traditional healers? 4. Did you present late due to painless lump; thought it was not dangerous enough to consult the expert physician? 5. Did you feel shy to show breasts to male doctors with no access to female doctors in the surroundings? 6. Did you suspect cancer and had fear of losing breast? 7. Did you present late because of unaffordability? 8. Did you present late due to lack of family support? Lastly, they were asked if any other factors were contributory which were not specifically enquired about.

Data was stratified with respect to studied socio-demographic variables which include age (<45 or >45 years), menopausal status (pre or post-menopausal), education status (<8 or >8 school years) and socioeconomic status (poor-low: below poverty ration card holders or middle-high: high income ration card holders)

Statistical analysis

Data from each patient will be collected and tabulated using Microsoft Excel. Chi-square test was employed as a test of association between the variables. Results were then assessed for significance (p value) using SPSS.

RESULTS

The mean age of the 50 participants was 48±11.5 years (median age 47 years) with a range of 25-78 years. Majority of them were married (66%) and belonged to rural areas (42%).

Higher age group, less than 8 years, school education, low to middle socioeconomic status were significantly associated with delayed presentation (p<0.05).

The first symptom of breast cancer reported by the majority was a lump (94%) followed by pain (6%).

Out of 100% (n=50) of patients who presented late, 88% were unaware about disease nature or prognosis, patients who were aware had information from local people and not through screening modality or media, 86% patients were not affording for treatment expenses, only 3 patients knew about government schemes for treatment. 64% patients were shy to be examined by male doctors hence didn't present early as female doctors were not available in nearest center, 20% opted for different treatment modalities like Ayurveda, homeopathy as advised by family or due to unavailability of doctor or screening modality, 30% had fear of losing breast, again most of their awareness was from other patients, 4% presented late due to other reasons like family emergency or lactating. 52% thought nothing to worry as lump was painless.

Table 1: Demographic properties of women with delayed presentation of breast cancer.

Variable	N	%
Age		
<45 years	22	44
>45 years	28	58
Primary area of living		
Rural	21	42
Urban	29	58
Marital status		
Married	33	66
Divorced	1	2
Widowed	16	32
Financial status BPL RGJY		
Low-medium	44	88
Medium-high	06	12
Educational status		
Grade 1 to 5	22	44
Grade 6 to 10	10	20
Grade >10	18	36
First symptom observed		
Lump	47	94
Pain	3	6
Skin changes	0	0
Family's reaction		
Wait for sometime	19	38
Try home remedies	17	34
Other treatments	11	22
Consult doctor	10	20

Table 2: Reason for delayed presentation.

Reason for delayed presentation	N	%
Unawareness about breast cancer/ignorance	44	88
Alternative therapy like Ayurveda/homeopath/herbal medicines used	10	20
Nature of disease due to painless lump	26	52
Shyness to show	32	64
Fear of breast cancer diagnosis and losing breast	15	30
Fear of treatment expense /inability to get treatment due to high cost	43	86
Other	2	4
Lack of family support	9	18

DISCUSSION

Breast cancer is the most common cancer in women, accounting for 25.1% of all cancers. Incidence of BC in developed countries is higher, whereas relative mortality is highest in less developed countries.

Delay is a major contributor to advanced-stage presentation of breast cancer, the predominant cause of poorer survival within the developing world.⁴

This study showed that the majority of patients lived in rural areas, which was significant with respect to tumour size. Other studies showed that women in rural areas had lower levels of knowledge of BC than those in urban areas.⁵ A systematic review of 18 studies (a total of 6,183 participants) of women with BC found that delay was multifactorial, individual, and complex. Factors that contributed to delay included poor knowledge of symptoms and risk factors, fear of detecting a breast abnormality, fear of cancer treatments, fear of partner abandonment, embarrassment at disclosing symptoms to health care professionals, taboos, and the stigma of having cancer.⁶

Many published studies on this subject revealed that this phenomenon of delayed presentation occurs across the globe with a range 14 to 73% (mean 33.1%±19.5% SD) of patients present late (>3 months) to the doctors. Most frequent reasons of delayed presentation in these studies were found to be painless nature of the lump, fear (partner abandonment, cancer treatment, disfigurement after surgery, chemotherapy), shyness, fatalism, using alternative therapies, denial and inaccessibility to healthcare services. Higher age groups, negative family history, low education and low socioeconomic status were found to be the factors associated with delayed presentation in the studies of Ali et al, Li et al, Norsa'adah et al, Innos et al, O'Mahony et al, Brzowska et al, and Jones et al.⁶⁻¹²

A way to overcome these issues and improve time to presentation is through better education and awareness of BC. Review could be undertaken by the community caregivers or nursing staff at the local clinics who could then give direct referrals to breast clinics in regional hospitals.

Education was also a significant factor ($p=0.033$) determining incidence of advanced breast cancer, most of our participants were educated up to high school.

Widows and divorcees had higher incidence of advanced breast cancer, probably due to lack of motivation and deficient social support structure. Presence of co-morbidities, past history of breast diseases, family history and symptom first noticed were found to be irrelevant variables in present study but the seriousness accorded to the symptom by the patient ($p<0.001$) and awareness about breast cancer ($p<0.001$) were highly significant variables.

The low socioeconomic group feared expenses and loss of income due to morbidity. Five of our participants gave events such as death, marriage and child birth in the family as reasons for putting off consulting a doctor,

reflecting the pressure our social structure applies on women to put family before self.

The predominant theme emerging from the results of this review emphasizes how poverty constitutes the underlying common denominator and most important barrier contributing to delayed patient presentation in these settings.

Current study has highlighted an acute knowledge gap that exists in the population regarding symptomatology of breast cancer and relevance of breast self-examination, this is a common theme present in many studies done elsewhere.^{13,14} This needs to be corrected with proactive steps taken by the health system and media to bring out scientific information into the public domain so that patients do not rely on hearsay for medical information.

Moreover, establishment of breast cancer support groups in the community will help patients in overcoming their fears and doubts regarding treatment and rehabilitation.

There is a need for a screening programme to pick up breast cancers early as it has been shown that early diagnosis leads to better survival especially in breast cancer.^{15,16}

CONCLUSION

Present study reveals that the late presentation of breast carcinoma is pointedly associated with lack of breast cancer awareness, poor socio-economic status, poor literacy rate, fear of disease and its treatment, poor knowledge of early detection methods.

Thus, from the above study we conclude that there is an urgent need for proper patient education about the signs and symptoms of breast cancer and the importance of breast self-examination and inclusion of screening methods for early detection and treatment of breast cancer. Proactive steps should be taken by the health system and media to bring out scientific information into public domain in acceptable manner to overcome the fear and doubts about the diseases, its treatment and rehabilitation. This can be done by giving proper community health education about the disease and its early detection through active social propaganda in print and through electronic media to win the fight against breast cancer.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Adam SA, Horner JK, Vessey MP. Delay in treatment for breast cancer. *J Public Health.* 1980;2(3):195-201.

2. Antonovsky A, Hartman H. Delay in the detection of cancer: A review of the literature. *Health Educ Monograph.* 1974;2(2):98-128.
3. Averill JR. Emotion and psychological defence. In: Weinstein ND, ed. *Taking care: understanding and encouraging self-protective behaviour.* Cambridge University Press: Cambridge; 1987: 54-78.
4. Anderson BO, Jakesz R. Breast cancer issues in developing countries: an overview of the Breast Health Global Initiative. *World J Surg.* 2008;32(12):2578-85.
5. Khan TM, Leong JP, Ming LC, Khan AH. Association of knowledge and cultural perceptions of Malaysian women with delay in diagnosis and treatment of breast cancer: a systematic review. *Asian Pac J Cancer Prev.* 2015;16(13):5349-57.
6. Ali R, Mathew A, Rajan B. Effects of socio-economic and demographic factors in delayed reporting and late-stage presentation among patients with breast cancer in a major cancer Hospital in South India. *Asian Pacific J Cancer Preven.* 2008;9(4):703-7.
7. Li WWY, Lam WWT, Wong JHF, Chiu A, Chan M, Or A, et al. Waiting to see the doctor: understanding appraisal and utilization components of consultation delay for new breast symptoms in Chinese women. *Psychooncology.* 2012;21(12):1316-23.
8. Norsadadah B, Rampal KG, Rahmah MA, Naing NN, Biswal BM. Diagnosis delay of breast cancer and its associated factors in Malaysian women. *BMC Cancer.* 2011;11:141.
9. Innos K, Padrik P, Valvere V, Eelma E, Kütner R, Lehtsaar J, et al. Identifying women at risk for delayed presentation of breast cancer: a cross-sectional study in Estonia. *BMC Public Health.* 2013;13:947.
10. O'Mahony M, McCarthy G, Corcoran P, Hegarty J. Shedding light on women's help seeking behaviour for self discovered breast symptoms. *Eur J Oncol Nurs.* 2013;17(5):632-9.
11. Brzozowska A, Duma D, Mazurkiewicz T, Brzozowski W, Mazurkiewicz M. Reasons for delay in treatment of breast cancer detected due to breast self-examination in women from the Lubelskie region. *Ginekol Pol.* 2014;85(1):14-7.
12. Jones CE, Maben J, Jack RH, Davies EA, Forbes LJ, Lucas G, et al. A systematic review of barriers to early presentation and diagnosis with breast cancer among black women. *BMJ Open.* 2014;4(2):e004076.
13. Burgess C, Hunter MS, Ramirez AJ. A qualitative study of delay among women reporting symptoms of breast cancer. *British J Gen Pract.* 2001;51:967-71.
14. Ibrahim NA, Oludara MA. Sociodemographic factors and reasons associated with delay in breast cancer presentation: a study of Nigerian women. *Breast.* 2012;21:416-8.
15. Porta M, Gallen M, Malats N, Planas J. Influence of "Diagnostic delay" upon cancer survival: an

analysis of five tumor sites. *J Epidemiol Community Health.* 1991;45:225-30.

16. Neal RD. Do diagnostic delays in cancer matter? *Br J Cancer.* 2009;101(2):9-12.

Cite this article as: Shah P, Save M, Khadilkar R, Shah P, Kader H, Eswarawaka M. Locally advanced breast cancer: an observational study for the delay in presentation of patients. *Int Surg J* 2020;7:1758-62.