Delay among women reporting symptoms of Breast cancer

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Abstract

Objective

To describe factors related to timing of first contact with an allopathic medical practitioner , among patients with symptoms of breast cancer attending breast clinic at Cancer Institute, Maharagama.

Method

A descriptive cross sectional study was conducted among a total of 335 consecutive women who attended the clinic for the first time, during the period of survey. All the patients registered at the breast clinic for the first time were recruited. A pre-tested, interviewer administered questionnaire was used.

Results

Thirty eight percent (n=127) of patients had a delay in presentation which was defined as greater than 12 weeks. The mean time duration between experiencing a symptom and in seeking medical care was 11.5 weeks (SD=1.41). Factors significantly related to delayed presentation were age (elderly) [p<0.001], marital status (unmarried, divorced or widowed) [p=0.037], fertility status (women with no children) [p=0.011], ethnicity (Tamils and Muslims) [p= 0.002], an income of less than Rs. 10,000 (p= 0.002), low social class (p<0.001), first symptom not being a lump (p<0.001), a distance of > 5 km from home to medical facility (p=0.003), not attending a well woman clinic (p=0.002), assuming the condition to be a benign one (p<0.001), having undergone any kind of surgery under general anaesthesia (p =0.038) and poor knowledge on breast cancer (p<0.001).

Conclusion

Delay in seeking treatment for suspected breast cancer is a problem in Sri Lanka. Women may benefit from greater awareness of the benefits of early detection and expansion of diagnostic and treatment facilities for breast cancer.

Key words: Breast cancer, Symptom, Delay

Introduction

Global situation of breast cancer

Breast cancer is a common and frequently fatal disease, and the most commonly diagnosed cancer in women. More than 1.2 million women are diagnosed with breast cancer annually worldwide (1).

Breast cancer is the fifth most common form of cancer out of all cancers occurring in males and females (1).
The burden of breast cancer is increasing in both developed and developing countries, and in many of the regions of the world. Worldwide breast cancer accounts for almost 1% of all deaths thus the cause of death in over 400,000 women (1).

According to American association of cancer research, breast cancer is the second leading cause of cancer related deaths in women after lung cancer. One in 33 women who have breast cancer will die. Survival for women with breast cancer has improved significantly. In the early 1970's five year survival rate were 52%, and the latest figure is 81% (2).

Situation in Sri Lanka

Cancer incidence in Sri Lanka is estimated to be around 67.9 100 000 population. The common sites for cancer in Sri Lanka are oral cavity in males and breast among females (3).

Breast cancer incidence in Sri Lanka has risen in the recent past. A crude incidence is 18.7 per 100 000 female population and it has increased from 6.8 to 18.7 per 100 000 female population in last 20 years

(3).Over the last decade the mortality rates have fallen and this is largely attributable to screening programmes and increased use of adjuvant systemic therapies. Unfortunately, despite this improvement, a number of women relapse and develop metastatic disease and so breast cancer remains a major clinical challenge (4).

Early detection of breast cancer

Early detection comprises early diagnosis in symptomatic population and screening in asymptomatic, but at risk population. Breast cancer is very amenable to early detection. Periodic examination by mammography is the accepted standard for early detection of breast cancer in developed countries. This is however not a practicable and affordable method for breast cancer screening in Sri Lanka. It has been suggested that breast cancer would be best tackled through an early detection programme using clinical breast examination performed by a trained personnel (5).

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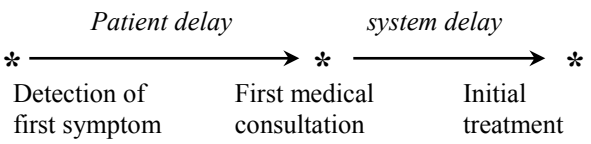
Delay in breast cancer

Delay can be at any point from the onset of first symptom to definitive treatment. Delay in breast cancer is defined as **patient delay** (the interval between first detection of symptom and first medical consultation) and **system delay** (the interval between first presentation to a medical professional and initial treatment) (6). Prolonged delay is usually defined as interval greater than 12 weeks, either in patient or system delay (6).



Several studies have proved that about 25% of patients (one in four women with breast cancer) delay more than three months before presenting to a health professional (6,7). On the other hand some other studies have shown a range of 19% to 32% for patient delay (8-10). 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 (11).

There is very strong evidence that delayed presentation of breast cancer is associated with lower survival (7). Therefore, it is important to understand the factors that influence patient delay and to develop strategies to minimize it.

Methodology

A hospital based descriptive cross sectional study was carried out in Breast clinic at Cancer Institute, Maharagama.

The study population was identified as all the women presenting with a symptom of breast cancer to the Breast clinic for the first time. If the patients were referred from Well Women clinics after incidental finding of the symptom (patient has not detected the symptom by herself) and patients who came for screening of breasts without any symptoms were excluded from the study.

The minimum sample size calculated was 302 by using the standard formula (12). All the eligible patients attending Breast Clinic for the first time, during the study period (from 15th of August 2008 to 9th of November 2008), were recruited consecutively until the sample size was reached.

An interviewer administered, validated, pre tested questionnaire was used. Data were entered and analyzed using Statistical Package for Social Science (SPSS)**.** Statistical significance of difference between categories were performed using several tests and P value <0.05 (95% CI) was considered as statistically significant.

Ethical clearance was obtained from the Ethical Review Committee of Faculty of Medical Sciences at University of Sri Jayawardanapura and written consents were obtained from the respondents.

Results

Of the 337 eligible patients who were invited to participate in the study, 2 patients were not willing to participate (non response rate of 0.5%), giving a final study sample of 335.

The participants represented 12 Districts, but most were from Colombo, which consisted of 46.6 % (n=156) of the study sample. The socio-demographic characteristics of the study population are shown in Table 1.

Mean age of the study sample was 45.42 years (SD 14.189). The minimum and maximum ages were 20 years and 78 years. Sinhalese represented the majority (95.2%, n=319) and most of the women were married (69 %, n=231).

The mean time duration between experiencing symptom and in seeking medical care was 11.5 weeks (SD=1.41). A prolonged delay of more than 12 weeks was reported by 38% (n=127) of patients.

The total score given for the knowledge on breast cancer was 10. Out of 335 only 24 had scored the maximum 10 marks. The mean score was 5.65 (SD = 2.32). About 50% (n=172) of the study population was having average knowledge (score 5 - 8) on breast cancer while 33% (n=111) had a poor knowledge (score <5).

As shown in Table 2, factors significantly related to delayed presentation were being in the elderly age (p<0.001), being unmarried, divorced or widowed (p=0.037), fertility status (women with no children) (p=0.011), ethnicity (Tamils and Muslims) (p=0.002), an income of less than Rs. 10,000 per month (p=0.002), low social class (p<0.001), first symptom not being a lump (p<0.001), a distance of > 5 km from home to medical facility (p=0.003) , using public transport to travel (p<0.001), travelling cost of > Rs. 50.00 (p=0.008), not attending a well woman clinic (p=0.002), assuming the condition to be a benign one (p<0.001), those who had not undergone any kind of surgery under general anaesthesia (p=0.038) and poor knowledge on breast cancer (p<0.001).

Table 1: Socio demographic characteristics of the study population

Characteristic	Frequency	%
Age (in completed years)		
<35	84	25.1
35 to 44	67	20.0
45 to 54	92	27.4
55 to 64	64	19.1
65 and above	28	8.4
Ethnicity		
Sinhalese	319	95.2
Tamil	8	2.4
Muslim	8	2.4
Marital status		
Unmarried	60	17.9
Married	231	69.0
Divorced	4	1.2
Widowed	40	11.9
Educational level		
No schooling	8	2.4
Grade 1 to 5	48	14.3
Grade 6 to 10	71	21.2
OL completed	124	37.0
AL completed	68	20.3
Higher education	16	4.8
Employment status		
Employed	72	21.5
Not employed	243	72.5
Retired	20	6.0
Social class		
Class i	16	4.8
Class ii	56	16.7
Class iii	59	17.6
Class iv	72	21.5
Class v	132	39.4

Table 2: Distribution of delay in seeking allopathic treatment by patient characteristics

Patient characteristics		Delay more than 12 weeks		X^2	df	P value
		Yes (n=127)	No (n=208)			
Age (years)	20 – 40	31	104	26.72	2	.000 *
	41 – 54	44	64			
	55 – 80	52	40			
Residence	Western	88	152	.556	1	.456
	Other	39	56			
Nationality	Sinhalese	115	204	9.820	1	.002 *
	Others	12	4			
Marital status	Married	79	152	4.354	1	.037 *
	Others	48	56			
Having children	Yes	87	168	6.526	1	.011 *
	No	40	40			
Educational level	none and up to 5	24	32	0.770	2	0.681
	up to OL	71	124			
	AL and above	32	52			
Employment status	Employed	36	36	5.963	2	.051
	Not employed	83	160			
	Retired	8	12			
Monthly income (Rs)	Up to 10000	75	92	12.710	2	.002 *
	10000-20000	36	56			
	>20000	16	60			
Social class	i and ii	20	52	19.69	2	.000 *
	Iii	11	48			
	iv and v	96	108			
First symptom	Lump	40	164	74.242	1	.000 *
	Other	87	44			
How noticed	Self examination	16	28	.051	1	.820
	Incidental	111	180			
Ever done BSE	Yes	44	88	1.939	1	.164
	No	83	120			
Distance (km)	0-5	52	108	3.809	1	.003 *
	>5	75	100			
Method of transport	Public	119	108	63.002	1	.000 *
	Other	8	100			
Cost of travelling (Rs)	<50	95	128	6.234	1	.008 *
	50 or more	32	80			
Family history of breast CA	Yes	16	16	2.197	1	.138
	No	111	192			
Past history of breast disease	Yes	20	32	.008	1	.929
	No	107	176			
Undergone Surgeries	Yes	83	112	4.293	1	.038 *
	No	44	96			
Attended WWC	Yes	20	64	9.470	1	.002 *
	No	107	144			

*statistically significant

Discussion

Breast cancer is one of the most growing and important women's health problem. Delayed presentation of symptomatic breast cancer of three months or more is associated with lower survival rates from the disease. While some of this delay is health provider related, an estimated 19% to 32% of women wait at least three months before seeking medical help with breast symptoms (7,8).

The study was a hospital based descriptive cross sectional study as the aim was to identify the proportion of women who delayed presentation and the factors that led to it. Most of the other studies done in foreign countries also were hospital based studies (6,7). From those studies most were descriptive cross sectional (6,7).

National Cancer Institute, Maharagama was selected for the study because it receives patients from all over the country and adequacy of sample size during the permitted time.

The study population included, women presenting with symptoms of breast cancer to the breast clinic during the study period. Diagnosed patients with breast cancer were not taken in order to minimize recall bias.

Owing to the different level of education and literacy of the study population, an interviewer administered questionnaire was preferred as the data collecting tool. To reduce probing the interviewers (pre intern medical graduates) were trained to ask standard questions given in the questionnaire and they were given clearly written guidelines.

Expert opinion from two consultants at Cancer Institute Maharagama was taken for preparation of the questionnaire in order to validate consensually.

The women in the study sample represented 12 Districts, but majority were from Colombo. When district of residence was compared with delay, two groups found to be comparable ($p = 0.456$). But when considering the Western Province the accessibility to health facilities is more, and the awareness would be much greater among the women. Ideally the patients would have divided in to two groups according to rural or urban.

Age was related to the delay in presentation for treatment ($p < 0.001$). Young patients had presented earlier in contrast to elderly patients. This implies that young women are more aware about the symptoms and importance of early treatment of breast cancer. They have a more value in their lives. Elderly women tend to neglect themselves.

Ethnicity was a factor which is significantly associated with delayed presentation ($p=0.002$) where Tamils and Muslims had presented late**.** This may be due to their poor literacy, lack of awareness about the symptoms and cultural taboos, because the breast is regarded as part of female sexual identity.

Women who were married had presented earlier than unmarried, divorced or widowed women ($p=0.037$). Married women are under protection of the husband, so they tend to present early. Most unmarried women were under care of parents or guardian. As mentioned in one study (6), widowed and divorced women had a significant delay compared to married women. Perhaps one might argue that this could be explained by the fact that widowed, divorced and unmarried women do not have enough motivation to seek help or care about themselves and lack support.

Level of education of the patient did not affect the time of presentation for treatment ($p=0.681$). But the role of education, in decreasing delay has been confirmed in other studies. One study (6) revealed an inverse relationship between delay and the level of education of the patient, that is lower the educational level more the delay. On the contrast, Burgess et al (9) found that being better educated had increased the risk of delay. However another study (7) stated that the level of the education of the patient did not affect the time of presentation.

Employment status of the women did not affect the time of presentation ($p=0.051$). But one can argue by the fact that being employed can reduce the patient delay because they are in a better position for access to information and health care facilities.

More than half of the women had monthly income less than 10000 rupees. This could influence by the fact that families with higher income will go to the private sector for the treatment, ultimately families with lower income ending up in government hospitals.

Income of the family was another factor ($p=0.002$) for the delay where women with lower income had presented delayed. This could be explained by limited financial resources for travelling and loss of daily wages.

Most of the women in the study were belonged to social class v (39.4% n=132). There was a significant association between social class and the delay ($p<0.001$) Therefore it can be implied that those with a lower standard of living index are more liable to delay in presentation. This observation was also supported by the studies carried out in other countries (6).

Women had presented late to a clinician ($p<0.001$) if they had found a symptom other than a breast lump. (All the symptoms other than a breast lump were grouped together as not having a lump). This may be explained by perhaps fear of cancer when a

woman finds a lump in her breasts, or lack of knowledge about common symptoms of breast cancer.

A qualitative study of delay among women reporting symptoms of breast cancer concluded that women need further information about the different types of breast cancer symptoms to assist symptom recognition (9).

The mean duration to seek first medical care was 11.53 weeks (SD 1.41). Minimum duration was 1 week and maximum duration was 72 weeks. Out of the total study sample, 62.1% (n=208) of the women had presented within 12 weeks of detecting the first symptom, and others (37.9%, n=127) had delayed more than 12 weeks. This finding is considerably high when compared with other studies which gave a range of 19% to 32% for patient delay (7,9). However the extent of patient delay can be different in different places and one explanation for such a difference might be related to patients' health related behaviors.

When the distance from patient's residence to the first contact care was lesser the time taken to seek treatment was shorter (p=0.003). But this depends on the patient's choice because patients might prefer to go to a practitioner who is far away to their residence. But overall if a patient had to travel more than 5 km to see some kind of a medical practitioner that woman could be a candidate for delay in presentation.

Women who had not undergone any kind of surgery under general anaesthesia was a factor for the delayed presentation (p=0.038) and this is explained by the fact that the fear of surgery would be a cause for delay.

Women who had attended WWC before had presented earlier than who had not (p=0.002). The women who had attended WWC earlier are definitely more aware about the breast cancer, and the importance of detecting it early.

Effect of knowledge on breast cancer was related to the delay in presentation (p<0.001). Also other studies suggest that lack of knowledge about breast cancer is one important factor in delay and need educational programmes for the public (6).

Conclusions

The study findings suggest that the delay in seeking treatment for suspected breast cancer is a problem in Sri Lanka. Women may benefit from greater awareness of the effectiveness of early detection and expansion of diagnostic and treatment facilities for breast cancer.

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