

RESEARCH ARTICLE

Reasons for Patient's Delay in Diagnosis of Breast Carcinoma in Pakistan

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Abstract

Background: Delay in diagnosis of breast cancer is associated with a poorer survival and a pivotal contribution to this delayed diagnosis comes from patient delay in presenting at a clinic. Reasons involved must be evaluated in order to decrease this reducible delay. **Objectives:** *i)* To evaluate the reasons for patient delay in diagnosis of breast cancer; *ii)* to investigate any association with other variables. **Materials and Methods:** A 6 month cross sectional study (from July 2012 to Dec 2012), was carried out in Surgical and Oncology Units of Civil Hospital, Karachi. A total of 100 females diagnosed with breast cancer of any histological type were interviewed after informed consent and relevant data were collected. Due ethical clearance was obtained. **Results:** Mean age was 47.5 ± 12.1 years with a range from 25-77 years. Mean duration of delay was 5.13 ± 4.8 months, from shortest 1 month to longest 36 months. Duration of delay was observed to be no delay (<1 month) in 28%, short delay (1-3 months) in 30% and long delay (>3 months) in 42% of patients. Considering the symptoms as "harmless" (39%) was the most frequent reason of delay followed by "temporary" (20%) and the "use of traditional methods" (12%). Most common reason for later approaches was an increase in the size of the lump (41%). Statistically significant association (p -value <0.05) of longer patient delay was obtained with being single, being illiterate, painless breast lump as the first symptom, negative family history of breast cancer and vague attribution of the symptoms. **Conclusions:** Significant delay in approach to health care facility was observed in our study due to variable reasons given by women. Sufficient awareness regarding breast cancer, its symptoms and favorable effects of a timely diagnosis on prognosis must be imparted to our general population.

Keywords: Breast neoplasms - health behavior - diagnosis - patient delay

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Introduction

Breast Cancer is the most common female cancer of the world. The delayed diagnosis is more responsible rather than the disease itself in causing mortality of the patient, as early diagnosis and prompt treatment is associated with better prognosis when compared to fatal outcomes related to significantly delayed diagnosis (Afzelius et al., 1994; Gilani et al., 2003). Pakistan has highest mortality in Asia due to Breast cancer with around 40,000 deaths annually (Zujewski, 2011) an important reason of this being an advanced stage of cancer at the time of diagnosis in nearly one third of the patients. (Malik, 2002) Besides lack of national screening programs for breast cancer in our country and a low trend in our population of performing regular self examination of breast (Gilani et al., 2010) which prevent an early and timely notification of the disease, an important contribution to this delayed diagnosis is patient delay.

Patient's delay is a delay on the part of the women, referred as an interval between noticing any suspicious

breast symptom and seeking medical advice (Abdel-Fatah et al., 1999) It has its distinctive share in delayed diagnosis of breast cancer among all female population of the world but more in developing countries in general (Hussain et al., 1994; Ibrahim et al., 1998; Harirchi et al., 2000) and our country in particular (Malik et al., 2002), where a high portion of the women delay consulting professional health care and seek their first medical advice when the innocuous and mildly offending symptoms have become uncompromising and unrelenting and when disease has entered its terminal stage, with nothing much then obviously remaining in the hands of the medical practitioner. A number of factors and fears have a role to play in it and a patient's delay can only be addressed if we actually know the reasons that prevent a lady from consulting the doctor as soon as she notices a lump in her breast.

Previous studies conducted at separate places have identified the reasons as ignorance among patients, fear of mastectomy, poor socioeconomic conditions and illiteracy (Hackett et al., 1973; Adams et al., 1980). Since

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in Pakistan a few researches have investigated the reasons of patient's delay (Rashid et al., 1996; Malik et al., 2003; Lodhi et al., 2010; Talpur et al., 2011), the data regarding our population is limited. So there is an immense need to evaluate those fears and factors in our population, make strategies to address them, provide proper guidance to our females making them fight those fears so as to reduce a delay in diagnosis with an idea that early detection ultimately increases the probability of survival (Gilani et al., 2003). So in an attempt to meet this need, our study aims at finding the factors or fears leading to a patient's delay in our population.

Materials and Methods

The cross sectional study was conducted among female patients diagnosed with breast carcinoma (of any histological type) admitted to the Surgical and Oncology units of Civil Hospital Karachi, Pakistan over a period of six months (July 2012-Dec 2012). A total of 100 patients were included through convenient sampling and after informed verbal consent. The data was collected from the patients through personal interviews conducted by authors and the information then noted in well formulated questionnaires. It included questions regarding bio data, age, marital status, education, any family history of breast cancer, the breast symptoms noticed, lapse of time between noticing the lump and first medical consultation, reasons for delay (if any), reasons for a later approach and other relevant information. Patients with benign breast disease were excluded. Data was analyzed through SPSS version 16.0. Ethical Clearance was taken prior to initiation of the study.

Results

Mean age of the patients in our study was found to be 47.6±12.1 years with a minimum age of 25 and maximum of 77 years. 70% of the total population were above 40 years, with most of them i.e. 30% being in 4th-5th decade of life. Age distribution of the patients is given in Table 1

Half of the patients 50% (n=50) were illiterate i.e. they have never gone to school ever in their lives. Majority were married (82%, n=82). A painless lump in any part of the breast was noticed as the first symptom in 80% (n=80) of the patients while in 20% other breast symptoms (like nipple discharge, any change in shape and color of breast or nipple) were noticed. Family history of breast cancer was present in only 20% (n=20) of the patients. Majority of the patients i.e. 54% had vague attribution towards the swelling. Descriptive statistics are given in Table 2.

Mean duration of delay in the patients was 5.13±4.8 months, ranging from shortest 1 month to longest 36

Table 1. Age Distribution of the Patients

Serial no	Age (in years)	Frequency
1	20-30	7
2	31-40	23
3	41-50	30
4	51-60	26
5	61-70	10
6	71-80	4

Table 2. Descriptive Statistics

Variables		N	%
Education	Illiterate	50	50
	Primary	22	22
	Secondary	13	13
	Intermediate	10	10
	Graduate	5	5
	Marital Status	Married	82
Unmarried		5	5
Divorced		3	3
Widowed		10	10
First Symptom	Painless lump	80	80
	Others	20	20
Attribution towards swelling	Lethal	20	20
	Non lethal	26	26
	No idea	54	54
Family history of breast cancer	Yes	20	20
	No	80	80

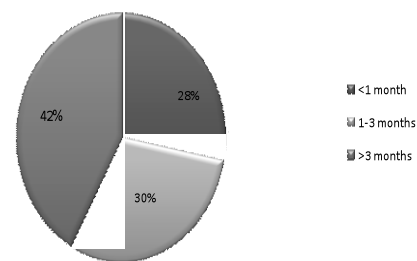


Figure 1. Frequency of Patient Delay in Months

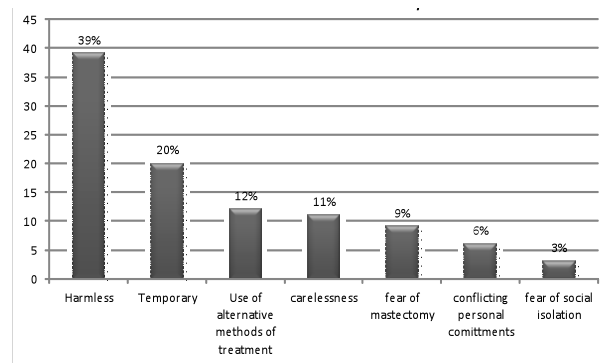


Figure 2. Reasons for Patient Delay

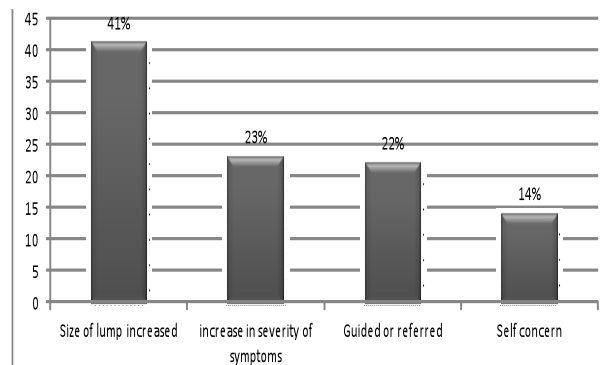


Figure 3. Reasons of Later Approach

months. Delayed approach by patients was categorized into no delay (<1 month), short delay (1-3 months) and long delay (>3 months). Frequencies are given in Figure 1.

Reasons of delay given by the patients were also evaluated. Considering the symptoms as harmless and temporary were found to be most common and the second most common reasons respectively as shown in Figure 2.

Causes of later approach were also evaluated, with

Table 3. Association of Mean Duration of Delay with Variables

Variables	N	Mean patient delay in months	Test values	p value
Marital Status				
Single	18	5.26±4.3	t-test value	0.002
Married	82	1.33±5.7	3.321	
Literacy				
Literate	50	3.75±1.2	t-test value	<0.001
Illiterate	50	5.63±3.2	-3.889	
First symptom				
Painless lump	80	6.60±3.2	t-test value	0.004
All others	20	4.30±2.9	2.92	
Family history of breast cancer				
Yes	20	4.63±1.9	t-test value	0.004
No	80	6.3±3.4	-2.92	
Attribution towards the symptoms				
No idea	54	6.9±2.3	F-value=4.60	0.001
Non lethal	26	5.1±3.8		
Lethal	20	3.5±3.4		

most women i.e. 41% seeking medical advice after significant delay due to increase in size of the lump and 23% due to severity of the symptoms as mentioned in Figure 3.

The association of mean duration of delay with different variables was also sought. A statistically significant (p-value <0.05) association of longer patients' delay was obtained with being single (unmarried, widowed, divorced), being illiterate (never gone to schools vs. those who had at least completed their primary education), painless breast lump as the first symptom, negative family history of breast cancer, vague attribution of the symptoms shown in Table 3.

Discussion

The incidence of breast cancer is increasing throughout the world with every passing year and more specifically in the developing countries (Sharma et al., 2012). In addition to keeping a check on the risk factors involved in its promotion, there is a need to focus on ways that could lead to its early diagnosis so that the mortality and morbidity associated with it could be reduced. So both the patient and the provider delays should be addressed. Our study focused on the patients' delay.

Mean age of patients in our study was found to be around 47 years. This is in near similarity with a study done in Nawabshah, Pakistan (Talpur et al., 2011) in which mean age was 43.5±10.38 years and range (28-80 years).

Patient's delay has a very important contribution to a delayed diagnosis. The mean duration of delay in our study was found to be around 5 months consistent with a study done in National Cancer Institute, Karachi Pakistan showing delay to be 17.2 weeks (Malik et al., 2003). Such a delay is considered significant enough to negatively affect the prognosis of the patients and provides evidence that such a delay exists among our females. The median patient delay observed in our population is noticeably high as compared to females of other developing and developed countries of the world like 13 days in British women (Nosarti et al., 2000), 4 weeks in Thai women (Thongsuksai et al., 2000), 2 months in Malaysian women (Norsa'adah et al., 2011) and 12 weeks in Iranian women

(Harirchi et al., 2005).

The prognosis for the disease seems to be worsening with duration of patient's delay. Shorter delays of 1-3 months are associated with a more favorable prognosis as compared to less favorable outcome with longer delays of greater than 3 months (Bish et al., 2005). Some studies have also suggested a prompt consultation within one month to be in the best interest of the patients (Arndt et al., 2002). In our study only 28% i.e. less than one third of all patients sought medical advice within one month, this partially corresponds with Stanley NC Anyanwu (Anyanwu, 2008) who found this figure to be even lower i.e. 12% for third world countries. This is in contrast to a study done in Germany (Arndt et al., 2002) and in UK (Burgess et al., 1998) where majority and around 56.7% patients respectively, had consulted the medical practitioner within one month, this high contrast is present due to greater number of public awareness programs imparting awareness and education regarding this disease to females of developed countries.

Shorter delays of 1-3 months were reported in 30% of our population with greatest portion of our population i.e. 42% delaying it further to more than 3 months. These statistics are replaced with comparatively better ones when we look at similar studies conducted in other countries of the world. An Iranian study reveals 75% of their population consulting professional health care within 3 months with only 25% delaying it to more than 3 months (Montazeri et al., 2003), a similar Thai study showing 26.6% of patients delaying more than 12 weeks (Thongsuksai et al., 2000). Noreen C. Facione (Facione, 1993) and an Egyptian study (Abdel-Fatah et al., 1999) showed a delay of greater than 3 months in 34% and 38.1% females respectively. However a few surveys have reported delays of more than three months in greater number of population as ours (Harirchi et al., 2005; Norsa'adah et al., 2011). It can be inferred clearly from all of the above mentioned statistics that females of our population are involved to the most in longer patient delays than any women population of the world except a few. This can grossly be attributed to low literacy rate, inadequate awareness about the disease in general and good effects of early diagnosis in specific, decreased health concerns and certain social and cultural taboos and myths more in our society as compared to any other part of the world.

The most frequent reasons given by women for a delayed consultation were their perception regarding the symptoms to be harmless and temporary, adding, that at that time those did not appear to put any hindrance to their day to day activities, weren't apparently affecting their lives by causing pain or in any way and thought those would go away with time. This demonstrates poor knowledge of our females regarding importance of these warning signs and symptoms of breast cancer, that how much severity these symptoms can attain with the passage of time, being irreversible and even proving to be fatal in late stages. Lack of significance attached to the lump was also reported as a frequent reason of delay in a similar study conducted in Pakistan (Malik et al., 2003), Nigeria (Ukwenya et al., 2008), Mexico (Pineros et al., 2009) and studies conducted abroad (Caplan et al., 1996; Nosarti et

al., 2000; Arndt et al., 2002).

Despite of the fact that awareness in our population regarding medical health care has increased as compared to past, still a majority initially prefer use of unconventional methods i.e. homeopathic, traditional herbal medicines and healers over doctors for cancer treatment (Malik et al., 2000), and that was also reported in a our study that a number of women delayed seeking medical advice just because they were on those traditional therapies or had preferred using those methods over professional health care as the first choice of treatment, this is consistent with a local study that found antecedent use of unconventional and alternative therapies before seeking any medical advice as an important reason for Patient's delay (Malik et al., 2002). Carelessness towards the symptoms was clearly reflected by the fact that females generally hold an overall carefree and negligent attitude with least priority towards their own health. A non- serious health care attitude was also reported in a local study (Lodhi et al., 2010).

A number of women had feared of having mastectomies, at once if they consulted the doctor. This can probably be attributed to the fact that our females generally lack the awareness about all treatment options available for this disease, that less invasive procedures like lumpectomies can be chosen according to the stage, extent and spread of the disease, and that undoubtedly depends on an early diagnosis which can at least partially be made sure by the women through a prompt medical consultation after noticing a breast lump or any suspicious breast symptom. Some local studies correspond with this reason (Rashid et al., 1996; Lodhi et al., 2010).

Conflicting personal commitments were also reasoned to be delaying, with women commenting that they actually knew the seriousness of the symptoms they were having, but due to some personal and family issues like job commitments or wedding of a close family member, they could not manage to seek a medical advice. This slightly reflects that although a minority of our study population, but still a percentage of women were aware and concerned about these symptoms but they were bound to or prioritized social commitments rather than personal health. A study done in Pakistan (Malik et al., 2003) and Malaysia (Norsa'adah et al., 2012), share this reason for patient's delay. Fear of social isolation was also reported by few females in our population.

In our study we also tried to evaluate the reasons which then obliged the women to seek a medical advice once a significant time has passed after noticing breast symptoms. Among those, the increase in size of the lump or increase in severity of the symptoms with the passage of time constituted the main reason, indicating that majority of the study population did not have sufficient background knowledge regarding these symptoms, that they do increase and become severe as time passes, with the women only appreciating this, when it was personally experienced by them, but that wasn't very much beneficial then as the major damage has already been done by that time. Guidance from other people was also reported by some women. This can be seen with a view that in our setting, females generally show reluctance to disclose or discuss such personal concerns even with family members,

isolating them from the advices or knowledge they might get from personal experiences or general awareness of the people in contact which in some way could promote a straight away consultation. Self concern was also reported but that also can indirectly be accounted to an aggravation of the symptoms that aroused suspicion and made her to consult the doctor.

The association of patient's delay was also evaluated with respect to different patient variables. Being single (unmarried, widowed or divorced) was found to be associated with more prolonged delays in our study. A probable reason of this can be that such women have a pessimistic attitude towards life, care least about their health and do not have any desire to solve their health related issues. Studies consistent with this (Thongsuksai et al., 2000; Montazeri et al., 2003; Ali, et al., 2008; Kumari et al., 2011), also hold a similar perception about widowed and divorced women who are less motivated to seek help or care about themselves and also lack support (Facione 1993). However a study suggests that married women, delay more as compared to unmarried women (Harirchi et al., 2005) while another suggests no association between marital status and patient delays (Ramirez et al., 1999).

Being illiterate also led to longer patient delays in our study as compared to literate. Here this point needs to be mentioned that in our country the literacy rate is suboptimal and moreover, as almost all of our study population belonged to low socioeconomic status in which majority do not ever go to schools, the criteria of being literate was lowered down to an educational level up to primary (class 5), however one can promptly argue that such less years of school attendance can ever be sufficient enough to develop a positive and responsible attitude in our population and as International studies also suggest a schooling of < or =5 years as high risk for patient's delay (Montella et al., 2001; Harirchi et al., 2005). But in order to draw a line of demarcation, this criterion was set, and a statistically significant association of illiteracy with longer patient delays was established. Other similar studies also support this association. (Abdel-Fatah et al., 1999; Ali R et al., 2008; Lodhi et al., 2010).

Painless lump as the first symptom also caused longer patient delays in our and in other studies (Rashid et al., 1996; Montazeri et al., 2003; Pineros et al., 2009; Lodhi et al., 2010). A study suggests that this association of a painless breast lump with a delayed presentation can be attributed to social and cultural beliefs of the regional populations in the world that the painless or asymptomatic lumps have no danger to life till the appearance of other symptoms like skin ulceration, edema, peau d'orange, nipple discharge or bleeding and inversion of nipple etc (Bilal et al., 2010).

Having a family history of breast cancer concluded in shorter delays in our study. This probably reflects the impact of one's close experience in his actions. A number of studies favor this association (Montazeri et al., 2003; Harirchi et al., 2005). Vague or no clear attribution towards swelling made the patients to delay most, with patients attributing it to be cancerous or lethal delaying least and those thinking it to be benign or non lethal delaying intermediately. This again highlights that

our females are short of adequate information regarding breast cancer and its presenting sign and symptoms and thus fail to attribute the symptoms to be indicative of the cancer. Similar has been reported in a study in which least number of the patients delayed medical consultation to more than 12 weeks who had considered the lump to be cancerous as compared to a greater number of those who had considered it to be benign or had no idea about their symptoms (Burgess et al., 1998) .

In conclusion, it can be concluded from our study that our females are involved in significant patient delays due to variable reasons given by them, almost all of those reasons pointing in one or other way towards a sheer deficiency of sufficient knowledge, information and awareness in our population regarding this fatal disease.

In limitations, as this study was conducted in a single setup, the results cannot be generalized to whole of the population. Since most of the turnover in our setup, was from low socioeconomic status with majority of them being illiterate, the results might differ for a similar study conducted among patients of higher strata and education level.

In recommendations, extensive breast cancer awareness programs should be conducted across the country both on Private and Government levels, imparting adequate knowledge to our masses regarding breast cancer and its presenting signs and symptoms, so that any such symptom is given its due importance. Specific attention must be drawn towards significance of a prompt consultation with the doctor after noticing any suspicious breast symptom, the beneficiary effects of an early diagnosis on the prognosis and the fatality associated with the disease if diagnosed at later stages. The necessity of regular self breast examination must be highlighted and adequate National Breast Cancer screening programs should be initiated and conducted on regular basis. Finally, similar studies are required to be conducted on larger scales covering the population of all strata.

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