

CARCINOMA BREAST;

Late presentation 'facts & factors'.

Dr. Muhammad Ateeq, Dr. Shazia Jehan, Dr. Muhammad Abid Bashir

ABSTRACT... Objective: To evaluate the factors responsible for the late presentation of carcinoma of breast in Pakistani women. **Study Design:** Prospective, Cross sectional, Interventional. **Setting:** Women Medical Complex Sialkot and Surgical Unit II. Aziz Bhatti Shaheed (Teaching) Hospital. Nawaz Sharif medical College, University of the Gujrat. Study. **Period:** January 2009 to June 2012. **Results:** A total of 87 patients of all age groups with carcinoma of breast were enrolled in this study. Mean age of presentation with breast cancer was 43 years. Stage III carcinoma breast was the most common presenting stage seen in 56 (64.36%) women. Socio economic status, delay in presentation and diagnosis, fear of mastectomy and its social consequences found to be major factors in the late presentation of carcinoma of breast. **Conclusions:** There is need to launch cancer public health campaign mechanisms, should include teaching of Breast Self Examination (BSE) to patients, Clinical Breast Examination (CBE) to health workers. Strenuous efforts should be made to break the vicious cycle of late presentation, poor treatment outcome and reluctance of patients to present to health facilities because of social mindset.

Key words: Breast cancer, late presentation, Mastectomy

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INTRODUCTION

Third world breast cancer is characterized by late presentation, occurring at relatively young ages and dismal mortality. The poor outcome has encouraged patients to patronize quacks and alternative healers. Recent reports from the developed world indicate a high association with obesity, smoking, and alcohol, habits which though not currently very popular in the third world are nevertheless increasingly accepted¹.

Breast cancer is now the most common female malignancy world-wide with up to a million cases annually^{2,3}. Areas of greatest incidence have been North America and Europe with black Africa considered an area of low incidence³. Studies from Nigeria indicate breast cancer has recently overtaken cervical cancer as the commonest female malignancy in areas of Western and Eastern Nigeria⁴. General worldwide mortality rates have decreased as a result of earlier detection, more favorable stage at presentation and improved management⁵. In the third world and in African – Americans breast cancer presents at advanced stage and with worse biologic behavior^{6,7}. Reasons for late presentation are believed

to be due to ignorance, superstition, self-denial, fear of mastectomy and unavailability of treatment facilities^{5,7,8}.

In Pakistan scenario is exactly same as in other third world countries. A study that evaluated the histopathological features of 3,279 breast cancer cases in Pakistan revealed and corroborated that breast cancer presents differently in Pakistan in comparison to the United States and United Kingdom. In Pakistan, the mean age of diagnosis was found to be 49, where as the mean age of diagnosis is 54 in Western countries⁹. The women in Pakistan presented with advanced disease at the time of diagnosis as reflected by larger tumor size (> 2 cm) in over 93% of cases more over the tumors were of high grade suggesting the presence of aggressive fast spreading lesions. Such features of presentation correlated with poor prognosis and increased number of lymph node metastasis⁹.

The epidemiology of breast cancer in Pakistani women is not precisely known due to lack of an adequate tumor registry system^{10,11}. However evidence

suggests that in Pakistani women, breast cancer presents at a younger age as compared to the Western population¹¹. In countries with limited resources, like Pakistan spending 2.4-3.7 % of GDP on health¹² majority of females present with advanced or metastatic breast cancer leading to poor outcome. Screening program based on routine mammography is not readily available in developing countries. In Pakistan clinical screening for breast cancer is availed by 9.5% of urban and 4.8% of rural females. Lack of awareness and low socioeconomic status are major reasons for late presentation of carcinoma of breast in Pakistani women¹³. British Health Global Initiative (BHGI) proposes breast cancer awareness and breast self examination (BSE) as a means of early breast cancer detection in developing countries¹⁴.

Keeping in view the different national and international studies identifying the various factors responsible for the late presentation of carcinoma of the breast in the third world countries, this study was conducted to identify and assess the different factors responsible for late presentation of breast cancer, at tertiary care public sector and a private sector hospital of a developing country.

MATERIAL AND METHODS

This descriptive study was conducted jointly at one public sector and one privately based women hospital of District Gujrat and District Sialkot respectively, from February 2011 to June 2012 at Aziz Bhatti Shaheed Teaching Hospital Gujrat and from January 2009 to June 2012 at Women Medical Complex Sialkot. Aziz Bhatti Shaheed (Teaching) Hospital Gujrat (ABSTH) is a tertiary care hospital affiliated with Nawaz Sharif Medical College, University of the Gujrat. Women Medical Complex is a privately based hospital providing health care services exclusively to the women by female medical and paramedical staff. All the women patients presented with a breast lesion suspected of breast carcinoma during the study period were included in the study. All the women patients

presented with breast disease symptoms that were proven to be benign clinically and by investigations were excluded from the study. Epidemiological data of the patient and clinical data of breast lesion was recorded in a preformed Performa by thorough history and examination. Malignancy was proved histologically by tissue biopsy. (FNAC, Trucut Biopsy, Excision/ Incision). Base line and different staging investigations were performed in all patients and appropriate treatment plan was formulated and offered to the patient according to stage of their disease. Socio-economic status (SES) was defined by key demographic and economic characteristics (reported in Government of Pakistan Economic Survey of Pakistan 2010-2011. Islamabad, Ministry of Finance, June 2011). The most important variable describing and classifying SES was annual household income. The literacy status was defined as educated and uneducated and further classified into primary, secondary and higher secondary education.

Data was reviewed, interpreted in terms of various epidemiological and clinical variables and, results were formulated and compared with national and international literature.

RESULTS

During the study period of three and half years, total 641 female patients with problems related to breast were entertained in both study setups. Out of total 641 patients with symptoms related to breast 87 females (13.57%) were found to have breast malignancy. The most frequent age group of women affected with carcinoma of the breast was between 41 to 50 years (59.77%) while the mean age was 43 years. Details are given in table I.

Carcinoma of breast stage III was the most frequent stage of presentation seen in 61 patients (64.36%) followed by stage IV seen in 21 (24.13%) of cases. Presenting stage is given in Table II.

It was observed that the illiterate women and the females with primary education level presented with advanced stage of disease. 23 and 31 patients presented in stage III, were illiterate and had education level of primary respectively. Details are given in Table III.

There was no much effect of locality either rural or urban was observed on presenting stage of the

Age group	No. of patients	%age
20-30 years	02	02.29%
31-40 years	12	13.79%
41-50 years	52	59.77%
51-60 years	12	13.79%
>60 years	09	10.34%
Total	87	100%

Table-I. Carcinoma Breast age group affected.

Stage of disease	No. of patients	%age
Stage I	03	03.44%
Stage II	07	08.04%
Stage III	56	64.36%
Stage IV	21	24.13%

Table-II. Carcinoma Breast Stage at presentation

Stage	Un-educated	Educated		
		Primary	Secondary	Higher Secondary
I	-	-	01	02
II	02	04	01	-
III	23	31	02	-
IV	07	14	-	-

Table-III. Relationship between stage at presentation and literacy

disease. 39 patients (44.82%) out of total 87 patients presented with stage III & stage IV were from rural area; where as 38(43.67%) were from urban area who presented with stage III and stage IV disease.

77 (88.50%) patients out of total 87 cases were presented with advanced disease. Details are given in Table IV.

Different factors affecting the stage of disease at presentation of patient with carcinoma of breast to seek medical advice are tabulated in Table V.

Stage	Locality			
	Rural		Urban	
	No.	%age	No.	%age
I	-	-	03	03.44%
II	03	03.44%	04	04.59%
III	30	34.48%	26	29.88%
IV	09	10.34%	12	13.79%

Table-IV. Relationship between locality and stage at presentation of Ca Breast

Intraductal carcinoma of the breast was the most frequent histopathological type of the breast tumor observed in our study, it was found in 80 (91.95%) out of total 87 patients. Upper outer quadrant of the breast was the most frequent site of involvement by the tumor seen in 38 (43.67%) patients. Table VI.

Different treatment options depending upon the stage of the disease and compliance of the patient to a particular treatment plan is given in Table VI. Neo adjuvant chemotherapy for down staging followed by MRM for the tumor at stage III & IV was the most frequent treatment plan offered to patients 75(86.26%). Out of total 75 only 23 (30.66%) followed the treatment plan and 44 patients (44.66%) disappeared and only 9 patients reported back to us with fungating mass.

Variable	No. & %age of patients and stage at presentation			
	Stage I	Stage II	Stage III	Stage IV
Educated	03 (03.44%)	05 (05.74%)	33 (37.93%)	14 (16.09%)
Uneducated	-	02 (02.29%)	23 (26.43%)	27 (31.03%)
Rural	-	03 (03.44%)	30 (34.48%)	09 (10.34%)
Urban	03 (03.44%)	04 (04.59%)	26 (29.88%)	12 (13.79%)
House Wives	01 (01.14%)	05 (05.74%)	41 (47.12%)	21 (24.13%)
Working ladies	02 (02.29%)	02 (02.29%)	15 (17.24%)	-
H/O treatment from GP	-	02 (02.29%)	30 (34.48%)	19 (21.83%)
H/O treatment from Gynecologist	01 (01.14%)	03 (03.44%)	42 (48.27%)	15 (17.24%)
H/O treatment from Surgeons	-	-	13 (14.94%)	15 (17.24%)
H/O treatment from traditional healers & Dam Darood	-	-	17 (19.54%)	14 (16.09%)
Influence of Grandmother / in laws	-	-	28 (32.18%)	06 (06.89%)
Fear of mastectomy	-	01 (01.14%)	13 (14.94%)	21 (24.13%)
Financial constraints	-	01 (01.14%)	12 (13.79%)	05 (05.74%)
Social & religious factors	-	02 (02.29%)	05 (05.74%)	09 (10.34%)

Table-V. Factors influencing the stage at presentation of Ca Breast

Pathological type	No.	%age	Site of breast involved					
			Upper outer	Lower outer	Upper inner	Lower inner	Center	Whole
Carcinoma-in-situ	-	-	-	-	-	-	-	-
Lobular carcinoma	02	02.29	-	-	-	-	-	02
Intraductal carcinoma	80	91.95	38	08	02	05	20	07
Medullary carcinoma	02	02.29	02	-	-	-	-	-
Phyllodies tumor	03	03.44	-	-	-	-	-	03

Table-VI. Pathological types & site of Breast involved by Ca Breast

DISCUSSION

The disease burdens of cancer are rarely considered for developing countries like Pakistan. Karachi Cancer Registry suggest that the age standardized annual rate

of breast cancer in Pakistan is 69.1 per 100,000, a figure equivalent to European and North American rates¹⁵. In fact, Pakistan’s population boasts the highest rate of breast cancer amongst all Asian

Treatment offered	Patient No. & %age	LAMA No. & %age	Follow up No. & %age
Modified radical mastectomy MRM & adjuvant therapy	09 (10.34%)	02 (22.22%)	07 (77.77%)
Neo-adjuvant therapy & MRM	75 (86.20%)	44 (58.66%)	23 (30.66%)
Simple mastectomy	03 (03.44%)	02 (66.66%)	01 (33.33%)
Breast conservation surgery & adjuvant therapy	03 (03.44%)	-	03 (100%)

Table-VII. Treatment offered and patient's compliance

countries as over 90,000 women suffer from breast cancer annually¹⁶. Specifically, the incidence of breast cancer in provinces of neighboring India is substantially lower than what is observed in Pakistan. In the Indian provinces of Barshi, Paranda and Bhum, breast cancer rates ranges from 8.7% per 100,000 per year to 28.2 per 100,000 per year in Bombay. At the Shaukat Khanum Memorial Cancer Hospital and Research Center in Lahore, breast cancer has accounted for 42% of total female malignancies treated¹⁷. Thus; we can appreciate the anomalous burden of breast cancer experienced by Pakistan¹⁷.

In Pakistan, the mean age of diagnosis of breast cancer was found to be 49, where as the mean age of diagnosis is 54 in Western countries¹⁸ a study conducted in Eastern Nigeria during the period 1998-2005, the age range was 17 to 80 years with a mean of 46.85 years. The peak age ranges were 30-39 and 40-49. Less than 10% of patients aged less than 30 years and more than 70 years respectively. In our study peak age range was 41 to 50 years with mean age of 43 years. Our patients are of relatively younger age group which is comparable with local studies¹⁹.

In our study delay from initial notice of symptoms to hospital presentation ranged from one month to 02 years, only 11 (12.64%) patients out of total 87 presented to health care facility within one month of appearance of symptoms. In Nigerian study 41% patients presented between 1 to 6 months of appearance of symptoms and delay ranges from 5

days to 09 years⁴.

The late presentation is universal among patients in the third world including Pakistan. Reasons of late presentation of carcinoma breast patients included in different studies are long distance to the hospital, lack of awareness, fear of the consequences like mastectomy and divorce, strong belief in traditional medicine, religious charlatan's poverty, poor education and fear and denial¹. Almost all these factor were also found to be responsible for late presentation of breast cancer patients in our study but lack of awareness, poverty, fear of mastectomy, and strong belief on traditional methods of healing including Dam & Darood were the most frequent factor responsible for late presentation. One unique fact that we found in our study was, in many cases patients did consulted health care provider at an early stage, even in some cases to doctors and gynecologists with breast symptoms, but neither the diagnosis was made timely nor the patients were properly guided and referred to specialized facility. Unfortunately in many cases clinical breast examination was not performed at all or performed inadequately due to many reasons. This is a very grave situation.

Social factors often underlie disease outcomes. Breast cancer in Pakistan is no exception to this general trend. Social factors such as income, level of education, cultural beliefs impact diagnosis, treatment strategies, patient's compliance, and survival in female breast cancer patients.¹³ In our study, socioeconomic and

cultural impact observed in the form of patient's compliance to different treatment options offered to patients. Out of total 87 patients with breast cancer, 48(55.17%) patients left against medical advice, they simply refused the treatment offered to them, and 44(91.66%) out of 48 were those whom mastectomy was planned with adjuvant/ neoadjuvant therapy. Fear of mastectomy and social consequences of mastectomy remained a major factor in late presentation, patient's compliance and disease outcome in third world countries¹. Regardless, the outcome of these patients may be improved by patient education and increased availability of better health care facilities to prioritize diagnosis at an early cancer stage, the most important prognostic variable⁹.

Improvement in public health awareness in terms of knowledge, attitude, and practice of self breast examination prove to be very helpful in eliminating fear and motivating the women for early presentation with breast symptoms^{20,21}. Role of female doctors, lady health workers, and nurses is very crucial, as due to religious norms female are reluctant to be examined by male doctors/ surgeon. Therefore female doctors and female paramedics should be trained to evaluate the symptoms of breast disease and know the method of clinical examination of breast so that patients with suspicious of breast cancer can be referred timely to specialized health care facility²¹.

Most funds by the Government and donor agencies to third world are targeted towards HIV and Hepatitis prevention campaigns. Considering the combination of social and physical factors governing the prevalence and effect of breast cancer, indubitably it is women of lower socioeconomic status who deserve greater consideration in designing interventions that aim to curb cancer mortality in Pakistan. Probably adding talks on cancer during the talks as a part of general health measures may assist in awareness and early detection of carcinoma of breast^{1,20}.

CONCLUSIONS

Despite the global burden of breast cancer, it is still largely perceived to be a battled by women in developed countries. In Pakistan, women face the harrowing reality of breast cancer worsened by late presentation, aggressive course of disease and deleterious social mindsets. Long term solutions that include educational campaigns, improved Physician/ health provider awareness of breast cancer, equal distribution of strengthened primary health care facilities, and stress upon the importance of the breast self examination (BSE) are necessary steps in curbing breast cancer mortality in Pakistan.

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AUTHOR(S):

1. **DR. MUHAMMAD ATEEQ**
Associate Professor
Surgery Nawaz Sharif Medical College
(University of Gujrat) Gujrat
2. **DR. SHAZIA JEHAN**
Assistant Professor Surgery
Islam Medical & Dental College, Sialkot
3. **DR. MUHAMMAD ABID BASHIR**
Professor of Surgery
Nawaz Sharif Medical College
(University of Gujrat) Gujrat

Correspondence Address:

Dr. Muhammad Ateeq
Associate Professor Surgery
Nawaz Sharif Medical College University of Gujrat
mateeq95@yahoo.com

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