

Presenting features of locally advanced breast cancer : a cross-sectional study

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Article Info

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Abstract

Worldwide, breast cancer is the most frequently diagnosed life-threatening cancer in women. This cross sectional study was done to assess the presenting features of locally advanced breast cancer. The mean age was 42.6 years with standard deviation 9.56, 86% were house wife, 53.5% were illiterate, 16% were postmenopausal and 75.8% had BMI of 20Kg/m². Ninety one point five percent had menarche at or above 12 years of age and 26.6 % had history of using hormonal contraceptives. Tobacco user and positive family history were found in 21.2% and 5.35% of the cases. 84% were presented with only lump and 16% with both lump and ulceration. Right breast was involved in 51.1%. About 37% cases presented on 3rd month of their symptoms. Around 71.2% patients presented with lump >5cm in diameter, axillary lymph nodes were palpable in 81% and fixed in 31% of patients. Around Sixty three percent of patients were in stage IIIA. Still a large fraction of patients present with advanced stage with varied presentation, sometimes surgeons face difficulties to offer the treatment. Proper awareness, early presentation and early detection give them the opportunity to receive the best treatment.

Introduction

The global importance of cancer is unquestionable, considered the second cause of death worldwide. The incidence of different cancers had increased both in developed and developing countries as a result of increasing exposure to risk factors and life expectancy¹. Breast cancer is one of the most common cancers with more than 1,300,000 cases and 450,000 deaths each year worldwide². In less-developed countries it is also the most frequently diagnosed life-threatening cancer and leading cause of cancer death in women³. Locally advanced breast cancer (LABC) refers to a term that includes a heterogeneous group of diseases. A subset of stage IIB (T3N0), stage III disease and inflammatory breast cancer (IBC) are included in this group. Data from the Surveillance, Epidemiology and End Results (SEER) program of National Cancer Institute indicated that approximately 7% of breast cancer patients have stage III disease at diagnosis⁴. Though we have no central data base or cancer registry, studies show that 52.6% of breast cancer patient presented as

locally advanced disease in Bangladesh⁵. Differences exist in respect of risk factors and presentation among various countries. In developed countries, mean age of presentation is much higher than the developing countries. Locally advanced breast cancer at presentation was also common in developing countries⁶.

Since 1990, mortality rate from breast cancer in United State and other industrialized countries has been decreasing at the rate of approximately 2.2% per year. In the United States, this decline has been attributed both to advances in adjuvant therapy and to increasing use of screening mammography⁷. However, opposite trend was observed in developing countries.

Breast cancer is a challenge for the oncologist and health policy makers in a country like Bangladesh as it is the leading cause of death among women⁸. This study was done to observe epidemiology, risk factors and pattern of presentation in respect to the clinicopathological status of locally advanced Breast Cancer in Bangladesh.



Methods

This was a cross sectional study, was carried out From July 2014 to June 2016 among patients attending at outpatient department and indoor of NICRH, Mohakhali. Women included were the locally advanced breast cancer patients sent for neoadjuvant chemotherapy from surgical oncology outdoor department. All the particulars of the patients, detailed history, physical examination and laboratory finding were recorded in the data collection sheet. Weight and height were measured during their visit and recorded. For analysis of data SPSS for Windows (IBM SPSS Statistics for Windows, version 23.0) software was used. Ethical clearance was taken from the Ethical Committee of NICRH for this study. Written informed consent was obtained from each and every patient after elaborate explanation regarding the undergoing study. Confidentiality of the research finding was ensured.

Results

Ninety four (94) patients with locally advanced breast cancer were included in the study. Mean age of the patients was 42.6 years, standard deviation was 9.56. (Figure-1)

More than 80% of patients came from rural area. Only 5% were single and among the married women, 94% have children. Most of the cases were house wife (86.2%). More than half of patients had family income of 10000-20000 Taka per month. Majority of the patients 85 (75.8%) had normal weight. More than half (53.5%) were illiterate. (Table-1)

Most of patients (91.5%) had menarche at or above 12 years of age and 26.6 % had history of using hormonal contraceptives. Among the patients, tobacco user and positive family history were found in 21.2% and 5.35% of the cases. Menopause was found in only 15 (16%) of cases.

About 97% of cases had their first child birth below the age of 30 and 95.5% patient feed their babies from both breasts.

Eighty four percent (84%) of the patients were presented with only lump and 16% patient presented with both lump and ulceration. Right breast was involved in 51.1%. About 37% patients were presented on 3rd month of their symptoms and rest of the patients presented later. Fifty one percent patients were diagnosed by tru-cut biopsy. FNAC was second most common method of diagnosis. Incision biopsy was done in 11.7% of cases. (Figure-2)

Regarding tumour size prior to neoadjuvant chemotherapy (NACT), 71.2% patients presented with lump >5cm in diameter and axillary lymph nodes were palpable in 81% and fixed in 31% of patients. Regarding staging prior to NACT, stages IIB subgroup was found in 18 % of patients and maximum patients were in stage IIIA subgroup comprising 62.7% of patients. (Table-II)

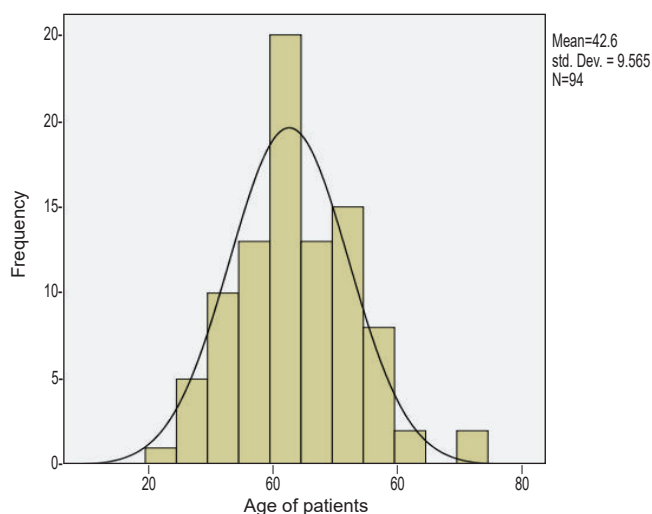


Figure-1: Histogram showing age distribution of the patients

Table-1		
Demographic variables and risk factors of locally advanced breast cancer		
Parameters		Percentages
Residence	Rural	81
	Urban	19
Marital status	Married	95
	Single	5
Monthly income	<10000	22
	10000-20000	52
	>20000	26
Menarche	<12 years	.5
	>12 years	91.5
Contraceptive use	Yes	26.6
	No	73.4
Menopause	Yes	16
	No	84
Tobacco consumption	Yes	21.3
	No	78.7
Family history	Yes	5.3
	No	94.7
Ist child birth	<30 years	96.6
	>30 years	3.4
Breast feeding	Yes	95.5
	No	4.5
Occupation	Housewife	86.2
	Workers	13.8
Education	Illiterate	53.57
	Primary	31.25
	Secondary	10.71
	Graduate	4.46
Body mass index	<18.5	15.1
	18.5-24.9	75.8
	≥25	8.1

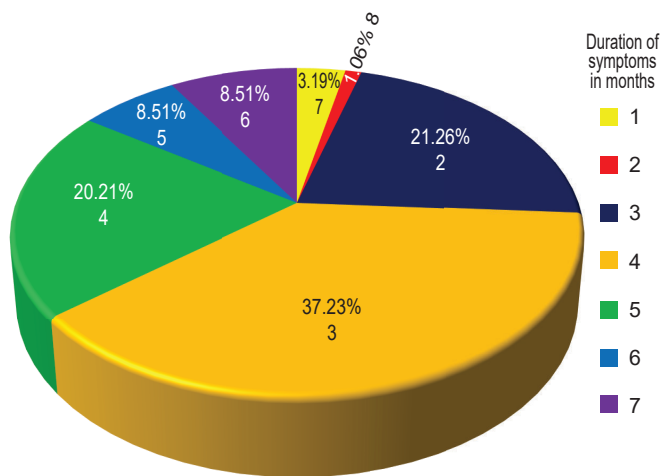


Figure-2: Pie chart showing distribution of patients by duration of symptoms

Table-II		
Pattern of presentation of locally advanced breast cancer		
Presentation		Percentages
Clinical feature	Lump	84
	Lump with ulcer	16
Side of involvement	Right	51.1
	Left	48.9
Tumor size	2-5 cm	13.8
	>5 cm	71.2
	Skin involvement	16
Axillary lymph node	Palpable	80.9
	Non palpable	19.1
Axillary lymph node	Fixed	30.9
	Not fixed	69.1
Staging	Stage II B	18.1
	Stage III A	62.7
	Stage III B	10.6
	Stage III C	8.6

Discussion

In the current study, mean age was 42.6 years and standard deviation was 9.5 years. Most of the patients (48/94) were in the 41- 60 years age group. No patient was found below 20 or above 80 years of age. Mean age was much lower compared to western data with 10-15 years variation. In Iran, average age of diagnosis was 15 years lower than western countries⁹. According to an NICRH report, the mean age of the breast cancer patients was 41.8 years (age range 15-94 years) and over 56% of the cases were women of reproductive age (15-44 years)⁸.

The study showed that 95% were married and among the married women, 94% have children. Data from the NICRH cancer registry⁸ show that over 93% of all breast cancer patients (n = 5255) were married. Most of patients (91.5%) had menarche at or above 12 years of age .Breast cancer risk reduced if a woman is older when she was menstruating and risk reduced 5% for 1 year delay¹⁰, 26.6 % had history of using hormonal contraceptives. About 54% patients had menarche at eleven or below age and 42% patients used oral contraceptive ¹¹. In an analysis of data from a multicenter, population-based case-control study, breast cancer risk did not vary by oral contraceptive use¹².

Among the patients, tobacco user and positive family history were found in 21.2% and 5.35% of the cases. Majorities (97%) of the respondents were non smoker and only 3% was smoker¹¹. Epidemiological investigations of the relations between smoking and breast cancer have yielded conflicting results. Several studies have suggested that smoking may decrease the risk of breast cancer. Others have reported no evident association, while a few have suggested that smoking may increase the risk of breast cancer, especially in pre-menopausal women ¹³A study by Anderson T showed that about 20 % of breast cancer patients have a family history of the disease in a first degree relative¹⁴.

In this study, menopause was found in only 15 (16%) of cases which was 57.2% in a study conducted by Rahman ⁵. The higher proportion of premenopausal cases in Bangladesh might be due to the fact that the overall population is much younger than in high-income countries, and possibly missing cases of older women who often feel shy about seeking medical help as well as getting lower priority for treatment compared to younger family members in South Asian countries.

The study finding showed that about 97% of cases had their first child birth below the age of 30. Many studied found that late age at first birth increases risk of breast cancer and risk increased 40% with first child birth at 35 years or later⁷. About 95.5% patient feed their babies from both breasts. Palmer showed that longer duration of breast feeding has been associated with a greater reduction in breast cancer risk¹⁵.

Most of the cases were house wife (86.2%) and more than half were illiterate. Due to illiteracy, they seek medical attention later and presented at advanced stage. More than half of patients had family income of 10000-20000 Taka per month. Majority of the patients 85 (75.8%) had normal weight followed by overweight 16 (14.28%) of cases. Obesity increases risk of breast cancer in postmenopausal women about 50% than lean women but reverse in premenopausal women¹⁶.

Eighty four percent (84%) of the patients were presented with only lump and 16% patient presented with both lump and ulceration. Right breast was involved in 51.1% of cases which was different with Tulinius where left breast was more involved ¹⁷. About 37% patients were presented on 3rd month of their symptoms and rest of the patients presented later. According to Burgess, nineteen per cent of patients delayed

>3months¹⁸. They described a number of factors predicted patient delay: initial breast symptom(s) that did not include a lump, not disclosing discovery of the breast symptom immediately to someone else, seeking help only after being prompted by others and presenting to the general practitioner with a non-breast problem. Most of the patients in this study delayed may be due to illiteracy, distance, our socioeconomic circumstance and lack of awareness.

Regarding tumour size prior to neoadjuvant chemotherapy (NACT), 71.2% patients presented with lump >5cm in diameter and axillary lymph nodes were palpable in 81% and fixed in 31% of patients. Rahman reported that T3 (tumour size >5cm) and T4 (skin involvement) were 52.6% and axillary lymph node involvement was present in 80% of cases⁵. Regarding staging prior to NACT, stages IIB subgroup was found in 18 % of patients and maximum patients were in stage IIIA subgroup comprising 62.7% of patients. **Ozmen reported that 21% of patients had stage IIB and 79% had stage III breast cancer prior to NACT¹⁹.** Due to illiteracy, poverty, lack of awareness, distance and socioeconomic circumstances, patients in this study group presented at advanced stage.

Conclusion

Still a substantial number of locally advanced breast cancer patients are attending every day to the health care providers. Illiteracy and poverty plays key role for delayed presentation. Creating awareness regarding self-examination and effective screening programme may detect early stage of breast cancer and can ensure satisfactory treatment outcome. The health care provider, social worker, media and NGOs can play substantial role to create awareness and remove fear and uncertainty regarding breast cancer treatment.

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