

Age Related Incidence of Carcinoma of Breast in Females

*Alam A,¹ Faruq TA,² Bahar MM,³ Sultana MT⁴

It was a prospective study carried out to observe the association of age in carcinoma of breast. Total 118 female patients with breast tumor were included in this study through detailed history, meticulous clinical examination and were confirmed by histocytological test. Of the 118 cases studied, 31 cases (26.2%) were diagnosed having breast cancer and 73.7% were benign breast tumor. Majority of cases were in between 11 to 20 years of age. Benign lesions below the age 40 years and peak incidence in 2nd and 3rd decade of life respectively and malignant lesions above the age of 40 years and peak incidence in between 41-50 years. So due to this constraint early diagnosis of the disease during which it is surgically curable is interfered. So every woman above age 20 years should be taught about self examination of breast monthly and report to the doctor immediately

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Key words: Carcinoma, breast, age, incidence

Introduction

Breasts, modified sweat gland are functionally of great importance for the offspring as the benefits of breast feeding are many fold. Breast is also dynamic structure that undergoes changes throughout women's reproductive life. This changes involve disturbances in the breast physiology extending from an extreme of normality to well defined disease process. One fourth women suffer from breast disease in their life time after puberty.^{1,2} Worst of all it becomes a cause of death among female population in the form of breast cancer which is most common cancer and second leading cause of cancer death of women after 30 years of age in USA and Western World.^{3,4} This malignancy can plagued a mother, a sister, a

wife, or a daughter and thus has wide familial implications. Breast cancer results from uncontrolled proliferation of malignant cells resulting appearance of a lump or a mass in the breast. In western world breast cancer accounts for 27% of all female cancer and one out of 14 women can expect to develop breast cancer in their life time.^{5, 6} There are considerable variation in breast cancer incidence, which is particularly low in developing countries and Japan.^{7,8} This variation may be due to social, dietary, early marriage and related other factors. Countries with traditionally low incidence however are now experiencing the increase in new case registration.

1. *Dr. Ashraful Alam, Junior consultant, Bangladesh Korea Friendship government hospital, Savar, Dhaka.

2. Dr. T. I. M. A Faruq, Ex-Professor of Surgery, Dhaka Medical College Hospital, Dhaka

3. Dr. Mohd. Mejbahul Bahar Junior Consultant (Surgery), 250 Bedded General Hospital, Gopalganj

4. Dr. Mst. Touhida Sultana, Medical Officer, 250 Bedded Mohammad Ali Hospital, Bogra

*For correspondence

In Bangladesh though there is no exact statistics about the incidence of breast carcinoma in females, appreciable number of patient suffer from breast cancer with poor outcome due to late presentation, diagnosis and treatment. A woman's reaction to any actual or suspected disease of breast may include fear of disfigurement, loss of sexual attractiveness and death. Social and religious factors, unawareness of fatality of the disease, false vanity and fear of infertility hinder early diagnosis and treatment. Early diagnosis is the key to increased survival.

As breast cancer is a devastating disease, it is important for the surgeon to rule out carcinoma with minimal invasive investigation and thereby prevent the patient undergoing mutilating surgery while, on the other hand not missing the diagnosis of carcinoma. A number of studies have been undertaken on carcinoma breast in this country. This study is being carried out to determine the incidence of carcinoma in cases of breast lumps presenting in tertiary hospitals in Dhaka.

Methods

It is a prospective study carried out in Green Land Hospital Pvt. Ltd. and Dhaka Medical College, Dhaka during the period of July 2005 to June 2007 enlisted 118 female patients inclusion and exclusion criteria after having their free and fair written consent. Research instruments included a self constructed data form consisting of details history, thorough clinical examination, investigations, stages that were done by the concerned doctors in Green Land Hospital Pvt. Ltd. and Dhaka Medical College Hospital, Dhaka. The researcher himself attended the selected hospitals & data were collected by using data preformed data collection sheet. After collection the data was checked, verified, edited manually for consistency to reduce error. Statistical

analysis of was done through SPSS Version-12 to fulfill the objective of the study and non parametric statistical test was performed where needed.

Results

Majority of patient with breast lump were in age group of 11-20 year. The study revealed that about four-fifth of the participant below 41 year presented with breast tumor. Woman over age of had lowest incidence (3%) of breast mass.

Table I: Distribution of patients by age group

Age in year	No. of patients (n=118)	Percentage (%)	p
11-20 yr	42	35.6	
21-30 yr	33	28.0	
31-40 yr	22	18.6	< 0.01
41-50 yr	18	15.2	
51-60 yr	3	2.6	
Total	118	100	

Most of the patient (74%) had benign breast tumor (Table II) with statistically significant difference ($p < 0.01$).

Table II: Incidence of benign and malignant cases

Histocytological diagnosis	No of patients (n=118)	Percentage (%)	p
Benign	87	73.73	< 0.01
Malignant	31	26.27	
Total	118	100	

The study observed that the patient of 11-20 year age group had the highest incidence of benign breast tumor and no patient in this group had breast carcinoma. Benign breast tumor was most prevalent in 41-50 age group. The difference in type of tumor among the age group was statistically significant ($p > 0.01$) (Table III).

Table III: Cases of benign breast disease diagnosed in age groups

Age group	Benign breast disease (n=87)	Breast carcinoma (n=31)	p
11-20	39	0	
21-30	30	2	
31-40	14	8	
41-50	4	15	< 0.001
51-60	0	6	
Total	87	31	

The study revealed that majority of cases presented with unilateral involvement of tumor and the study also found that either breast were more or less equally involved in breast tumor (Table IV). Regarding the location of breast tumor in various quadrant of breast, the study found that about 50% of the tumor located in the Upper and outer quadrant, the next prevalent location was Upper and inner quadrant. So it is found that the upper quadrant of breast was more vulnerable breast area for its tumor growth ($p < 0.001$) (Table IV).

Table IV: Location of breast tumor

Location of breast tumor	No. of patients (n=118) (%) [*]	p	
Breast/s involved	Right	59 (50)	< 0.001
	Left	56 (47.5)	
	Bilateral	3 (2.5)	
Quadrant involved	Upper and outer quadrant	15 (48.7)	< 0.01
	Lower and outer quadrant	2 (6.6)	
	Upper and inner quadrant	7 (22.6)	
	Lower and inner quadrant	2 (6.6)	
	Central	4 (13.2)	
	Whole breast	1 (3.35)	

*Percentage in parenthesis

Discussion

There is very small data from local study where attempt was made to find out the incidence of breast carcinoma with their presenting features. Due to social circumstances and unawareness about the nature of the disease, early diagnosis of the disease, is seriously interfered. This study conducted among 118 cases who are admitted in different surgical units of Dhaka Medical College Hospital, Dhaka, during the period from July 2003 to June 2004. Of the 118 cases studied, 31 cases (26.3%) were diagnosed as breast cancer, 67.7% of them were infiltrated type. 73.7% were benign breast tumor.

The incidence for malignancy in the present work 26.3% is little higher but comparable to those reported in studies i.e. 26% reported by Usmani⁹ in Pakistan and 24.8% by Chaudhury¹⁰ in India. This figure is much higher than those observed in the Western and developed countries i.e. 19.6% observed at Australia by Fleming et al.¹¹. The higher incidence in this work compare to the western world suggests a greater incidence of breast cancer in the population of the patient presenting to our hospitals. A significant patient's population is illiterate or poorly educated and has a poor awareness of breast cancer by virtue of Islamic beliefs, modest and poor awareness and only present to the surgeon, when significant symptom is produced such as pain, discomfort, skin changes or an increase in size of the lump.¹² These reasons and little data could be basis of higher incidence of carcinoma observed in our country as compared to the west.

In the present work, the incidence of breast carcinoma increases gradually with the age 00% in 2nd decade to 48.4% in 5th decade of life. On the other hand, the incidence of benign lesions is decreasing with the advancing age i.e. 44.8% in the 2nd decade to

the 4.59% in the 5th decade of life. This finding is coherent with study at United State by West and El Tanner in which no case of carcinoma was reported in 2nd decade of life.^{13,14} Only 2 cases of carcinoma was diagnosed in 3rd decade. The incidence of 6.45% in the present study is much higher than 2.5% observed by Palmar¹⁵, 2% by Donegan¹⁶ and 1% by Raju¹⁷ in their studies. The incidence of malignancy was 23.2% and 38.9% in 4th and 5th decade respectively which was also observed by Shahina and Usmani at Lahore.^{18,9} The incidence of malignancy as observed by Donegan and Bennette, in UK was 21 % and 15% respectively in the 4th decade and 30% in the 5th decade as reported by Donegan.^{16,19} The peak incidence of carcinoma of the breast observed by Usmani in 4th decade is almost similar to that of this study.⁹ The peak incidence reported by Gaudette in Canadian women was in the 6th decade.²⁰

Among the benign lumps fibroadenoma was the commonest 66.7% followed by fibrocystic disease, 21.1% in this study. Majority of case were in between 11 to 20 years of age. Higher incidence between 11 to 20 years was also reported by Donegan.¹⁶ The incidence among the benign lumps 66.7% is much higher than most study in the literature i.e. 34.5% Ciatto, 25% by Donegan.^{21,16} Raju has also same observation that fibroadenoma was the most frequent diagnosis under 30 years of age.¹⁷ This could be because it present as a discrete lump in the breast and occur in young ladies, a generation which today is probably more informed and educated.

In the present study the incidence of diagnosis a lump as malignant in women >30 years of age were negligible. Moreover a significant percentage of benign breast lumps including fibroadenoma and fibrocystic disease have been reported to regress with age. It is also recommended conservative option of non-

excision in the reasonable expectation of reduction of the lump in women under 35 to 40 years. Hence in these ages the surgeon can rely on his clinical judgment and reassure the patients after a negative diagnosis of carcinoma on FNAC and ask her for repeated follow up.

Conclusion

This study showed an alarming high incidence of age related breast cancer. Because of shyness and less concern about the disease they hesitate to come to physicians. So due to this constraint early diagnosis of the disease during which it is surgically curable is interfered. So every women above age 20 years should be taught about self examination of breast monthly and report to the doctor immediately, if she detect any abnormality in the breast or any lump in the breast. It can be done by arranging seminar and symposium etc, locally or nationally on breast cancer. Better health education with a view to make the women more conscious and that to will help them to realize about the disease.

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