FREQUENCY OF BREAST CARCINOMA IN PATIENTS PRESENTING WITH PALPABLE BREAST MASS. A CROSS SECTIONAL STUDY.

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ABSTRACT

BACKGROUND: Breast cancer is the most common malignancy in women and the second most common illness overall. It is the most prevalent illness in women globally and the leading factor in cancer-related disability and mortality in women. The morbidity and mortality linked to breast cancer can be decreased with an early diagnosis and timely treatment. Early diagnosis can improve case management, lessen patient worry in benign instances, and lower morbidity and death.

OBJECTIVE: The present study was conducted to evaluate the frequency of breast carcinoma and its associated factors among patients presenting with palpable breast mass.

MATERIALS AND METHODS: A descriptive cross sectional study was carried out at the surgical department, CMC-H Larkana. 124 women with palpable breast lumps and within the age bracket of 25 to 49 were included in the study for the research using a non-probability consecutive sampling. Statistical package for social science (SPSS version 23) was used for data analysis. For quantitative and qualitative variables we used the descriptive statistics and frequency/percentages. To evaluate the strength of association among variables, we employed the Chi Square Test of association.

RESULTS: FNAC report revealed that nearly 1/4th (24.19%) of the study subjects had malignant, most (71.77%) of the women had benign and 5(4.03%) females had inflammatory lesions. Most of the women (62.90%) were aged 36-49 years. The duration of lump was 1-3 months in 72(58.06%) cases and 4-6 months in 52(41.94%) cases. Half of the women presented with lump in the left breast, only 5(4.03%) females had bilateral involvement of breast. while 35(28.23%) cases had lump size > 5 cm. Evidently lump size had significant association breast carcinoma with p-value 0.006

CONCLUSION: It was evident from the findings of the study that females presenting with larger lump size and longer duration have higher odds of being malignancy. The women at the study setting, likewise the rest of the women in the country are unaware of self-care in order to detect the lump size at early stage and present to the hospital within shortest possible duration.

KEY WORDS: Breast cancer, carcinoma, Lump, Pakistan

INTRODUCTION

Cancer is one of the leading causes of death all over the world [1, 2]. Malignant illnesses are thought to have caused 8 million fatalities in 2008, and by 2030, that number is expected to rise to 11 million [3]. According to statistics, breast cancer is the most common cancer in women and the second most

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common illness overall[4]. Breast cancer is the most prevalent illness in women globally and the leading factor in cancer-related disability and mortality in women [5].

Breasts serve as modified sweat glands and functionally of great importance for the offspring. For a woman, having breasts is a sign of womanhood and one of the most important aspects of feminine attractiveness. Throughout a woman's reproductive life, her breasts undergo changes since they are a dynamic structure[6]. 1.67 million new cases of breast cancer were reported in 2012, making about 25% of all cancer cases[4]. It was the fifth most prevalent cause of cancer-related death overall due to the mortality rates, which ranged from 6 to 19 per 100,000[5]. Every American woman has a 12.4%, or one in eight, lifetime risk of having breast cancer[7].

With the passage of time, the incidence and disease specific mortality of breast cancer has significantly been increased. In 2018, 2.1 million new cases were reported, with 627,000 deaths.[8,9] One in nine women in Pakistan are at risk of developing breast cancer over their lifetime, making it the Asian nation with the highest prevalence of the disease[10]. International Agency of Research on Cancer reported 34,066 new cases of breast cancer in Pakistani women in 2018.[11]

In developing nations, breast cancer continues to be a major cause of cancer-related fatalities. Due to a dearth of information related to burden and trend of breast cancer., it is highly challenging to explain the epidemiology of breast cancer in Pakistan. The morbidity and mortality linked to breast cancer can be decreased with an early diagnosis and timely treatment. Therefore, this study has been designed to examine breast lesions causing breast lumps diagnosed by fine-needle aspiration as well as to evaluate the histology of cases identified as suspicious malignancy. Early diagnosis can improve case management, lessen patient worry in benign instances, and lower morbidity and death.

MATERIALS AND METHODS

A descriptive cross sectional study was conducted to evaluate the frequency of breast carcinoma and its associated factors among patients presenting with palpable breast mass at the department of general surgery , Chandka Medical College Hospital, Shaheed Mohtarma Benzir Bhutto University Larkana The study was conducted for a period of six months from January to June in 2022, using a non-probability consecutive sampling method , 124 women aged between 25 to 49 years with palpable breast lump were selected for the study.

All quadrants of breast were examined for any lump in the breast to assess the nature and extent of the disease. Both breasts were examined along with axillary lymph node examination on both sides. For diagnosis, local examination of the breast and fine needle aspiration cytology (FNAC) was done in all patients with palpable lump in breast. Therefore study variables; age, marital status, duration and size of lump and its size, examination of opposite breast, involvement of breast side, FANC cytology reports were recorded on a predesigned performa.

Data was entered and analyzed in statistical package for social science (SPSS version 23). We employed the descriptive statistics for quantitative variables, frequency and percentages for categorical variables. FNAC report was the dependent variable in this study. Based on FNAC reports, breast lump was divided in three categories; benign, malignant and inflammatory. We used Chi Square Test of Association for to find the association between dependent and independent variable.

RESULTS

FNAC report revealed that nearly 1/4th (24.19%) of the study subjects had malignant, most (71.77%) of the women had benign and 5(4.03%) females had inflammatory lesions. Figure 1

FIGURE. I   FNAC BASED CLASSIFICATION BREAST LUMP
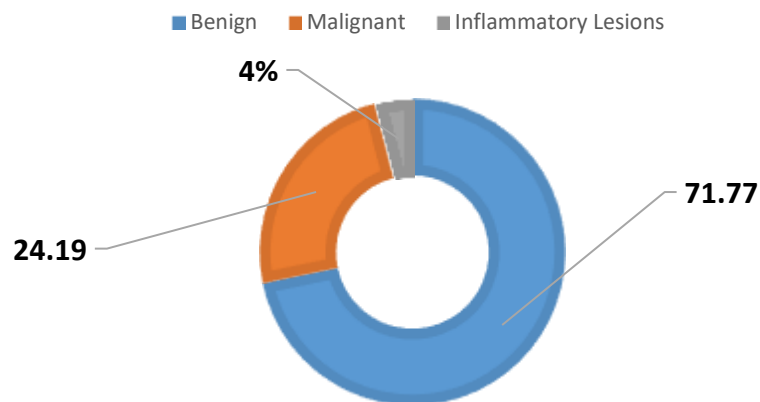
In this study, the mean age of patients was 40.98 (± 3.88) years, mean duration of lump was 2.94 (± 1.38) months and the mean lump size was 4.06 (± 235). Table I

Table. I   Descriptive Statistics in the study

Variable	*Mean*	Min	Max	Range	SD
Age	*40.98*	32	46	14	3.88
Duration of Lump(Days)	*2.94*	1	5	4	1.38
Size of Lump(cm)	*4.06*	1	9	8	2.35

Most of the women (62.90%) were aged 36-49 years. The duration of lump was 1-3 months in 72(58.06%) cases and 4-6 months in 52(41.94%) cases. Half of the women presented with lump in the left breast, only 5(4.03%) females had bilateral involvement of breast. The lump size was 1-2 cm among 47(37.9%), 3-4 cm among 42(33.87%) cases, while 35(28.23%) cases had lump size > 5 cm. While, 58(46.77%) females had fibroadenoma, 29(23.39%) females had Ductal cell carcinoma, and 17(13.71%) females had fibroadenosis/fibrocystic disease. Table II

Table II Frequency and Percentage of the Variables in the Study

Variable	No.	%
Age		
25-35	46	37.10
36-49	78	62.90
Duration of Lump		
1-3 months	72	58.06
4-6 months	52	41.94
Breast Involvement		
Right	62	50.00
left	57	45.97
Both	5	4.03
Lump Size		
1-2 cm	47	37.90
3-4 cm	42	33.87
5 or more	35	28.23
FNAC		
Benign	89	71.77
Malignant	30	24.19
Inflammatory Lesions	5	4.03
Cytology		
Fibroadenoma	58	46.77
Ductal Cell Carcinoma	29	23.39
Fibroadenosis/fibrocystic Disease	17	13.71
Gynaecomastia,	6	4.84
Abscess	4	3.23
Tubercular Abscess	2	1.61
Lactating Adenoma	2	1.61
other findings	6	4.84

Table III, explicates the association of dependent variable with the age, duration of lump, involvement of breast and the size of the lump. It was evident that only the lump size had significant association breast carcinoma with p-value 0.006.

Table III

Table III Chi Square Association of Breast Carcinoma with Various Factors

Independent Variable Associated Factors	Dependent Variable Breast Carcinoma (FNAC Report)			X2 P- Value
	Benign	Malignant	Inflammatory	
Age				
25-35	35	9	2	0.65
36-49	54	21	3	
Duration of Lump				
1-3 months	53	15	4	0.39
4-6 months	36	15	1	
Breast Involvement				
Right	48	13	1	
Left	39	15	3	0.18
Both	2	2	1	
Lump Size				
1-2 cm	34	8	5	
3-4 cm	34	8	0	0.006
5 or more	21	14	0	

DISCUSSION

Breast cancer is a multifactorial illness[12], which means that there are several predisposing factors leading to the disease. Even though the disease is widespread, there are notable geographical differences in its incidence, death, and survival rates. Numerous factors, such as population structure, lifestyle, genetics, and environment factors, might be to blame for such gross variation[13].

A reasonable proportion of women under 50 are diagnosed with breast cancer, despite the fact that women over 50 account for the majority of breast cancer cases. A thorough and accurate assessment can increase cancer diagnosis while minimizing pointless tests and procedures[14].

In the preset study, there were 89(71.77%) females who had benign, 30(24.19%) females had malignant and 5(4.03%) females had inflammatory lesions. Our findings are in line with the findings of similar research conducted in Pakistan by Baloch et al who observed that 72% (n=199) lumps were benign on histopathology while 29 % (n=83) showed malignancy [15]. Marginally higher percentage (26.27%) of malignant lump was reported by Alam et al after conducting a research in Dhaka Banglaesh[16]. However, much higher figures were reported in research conducted in Bannu Pakistan with 39% (n=97) of the patients with malignant carcinoma of the breast17. The distribution of benign and malignant lump was nearly similar in another study conducted in India which reported that 74% females had benign lump, 20% had malignant lump and the remaining 6% were inflammatory18. Also Kour G et al reported that Out of 100 patients 93% were benign and 7% were malignant. 21

In our study, most of the women (62.90%) were aged 36-49 years. Rest of the patients were younger than 36 years. With sample size of 2450 females in his study, Muhammad D et al reported that there were 60% (n=150) were aged between 18-36 years, 25% (n=62) were between 36-50 and rest of the 15% patients (n=37) were above 50 years17.

In our study half of the women presented with lump in the left breast (50%), only 5(4.03%) females had bilateral involvement of breast. Comparably, Talpur KA et al reported that the Left breast was involved in 53.33% and right breast in 44.66% of cases in their research conducted in Jamshoro Pakistan19.

In the present study, 58(46.77%) females had fibroadenoma, 29(23.39%) females had Ductal cell carcinoma, and 17(13.71%) females had fibro. adenosis/fibrocystic disease. I contrast 57% and 9% fibroadenoma and fibroadenosis respectively was reported in India18. Meanwhile fibroadenoma was much lower (30.9%) in study conducted in Peshawar20. In another study fibroadenoma was most common present in 63% cases, fibrocystic disease in 11% [21].

Breast cancer is significantly associated with age22,23, education level22,23, socioeconomic status22,23 and residence22, .age at first marriage23, infertilty23 and occupation23. According to the findings of this study, the size of lump is significantly associated with the breast carcinoma with p-value 0.006. Explanation to this finding could be in terms poor awareness of the women regarding change in size, lump, and abnormality arising in the breasts. Most of the population in

Pakistan is rural and women have very poor knowledge and literacy regarding breast care. Shahani MP et al have reported that 83.63% women do not know about self-breast examination Pakistan[24].

CONCLUSION

It was evident from the findings of the study that females presenting with larger lump size and longer duration have higher odds of being malignancy. The women at the study setting, likewise the rest of the women in the country are unaware of self-care in order to detect the lump size at early stage and present to the hospital within shortest possible duration.

LIMITATIONS

Even though the study has reported the results that ca be generalized to the public at large, however, the sample was size was small and the study was conducted only at the surgical ward. A research at larger scale in collaboration of oncology and cancer care set up could be another option work on the subject in the future.

RECOMMENDATIONS

In order to effectively combat the intensity of breast cancer, Pakistan urgently needs to implement numerous strategies, including raising community awareness of breast cancer, encouraging early breast cancer detection, removing barriers to the provision of better medical facilities, improving case reporting and documentation, and streamlining diagnosis.

AUTHORS CONTRIBUTION

Aasia and Marvi Sangi collected the data, Nadia Bhatti analyzed the data, Abdul Ghani Shaikh, Afshan Bhatti drafted and Muharram Ali critically analyzed the manuscript

CONFLICT OF INTEREST

Authors declared no any conflict of interest.

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