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Original Research

Incidence of CA breast in benign breast lumps: An original research

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ABSTRACT:

Introduction: Breast cancer is the second most common cancer in Indian women. But, its incidence can be decreased if its detection is made at earliest stages, i.e. in the preinvasive stage. This present study was undertaken to assess the incidence of CA breast in benign breast lumps. **Material and Methods:** A retrospective study was conducted in the Department of Pathology, JSS medical college and hospital. The data was collected form medical records department. The study period was of one years from Feb 2018 to March 2019 after approval from institutional ethics committee. **Results:** A total of 200 cases of breast lesions were analyzed. The ratio of benign to malignant lesions was 3.9:1. The overall mean age of patients with breast lesion was 34.5 years. Among 20.5% malignant cases, the age group affected most was 41-50 years. Only 6% of breast lesions were of inflammatory nature. Only 3% were malignant among the benign masses. The most common type of malignancy observed was invasive carcinoma of no special type (NST). **Conclusion:** The pattern of breast lesions provides valuable information regarding clinic-pathological profile of patients. The clinical diagnosis of breast lesions should be correlated with histopathological features for correct and adequate management of the case.

Keywords: Breast, Histopathology, invasive carcinoma of no special type (NST), Malignancy.

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INTRODUCTION

Breast pathologies are fairly common and most dreaded in females. Breast cancer is the second most common cancer in Indian women [1]. National Cancer Registry Programme suggests that 25% of the total cancer cases among Indian women constitute breast cancer. The incidence of breast cancer in India is about 85 per 100,000 women per year and nearly 50,000 women develop breast cancer in India annually [2].

Breast cancer has bad prognosis if detected in late stages. But, its morbidity and mortality can be reduced if it is detected at earliest stages, i.e. in the preinvasive stage [3]. Currently in India, the incidence of breast cancer is low but it is rising slowly among urban as well as rural females [4]. If breast cancer is left untreated, the mean survival is about 3 years after clinical presentation and 5 year survival rate is less than 20% [5]. This present study was undertaken to assess clinico-pathological aspect of breast lesions in a tertiary care centre of and also to assess the incidence of CA breast in benign breast lumps.

MATERIAL AND METHODS

A retrospective study was conducted in the department of Pathology, JSS medical college and hospital. The data was collected form medical records department. The study period was of one years from Feb 2018 to March 2019 after approval from institutional ethics committee.

A total of 200 cases of breast lesions were received in histopathology department. The tissues were routinely processed for histopathological examination and were stained by Hemotoxylin and Eosin (H & E). The patients attending surgery department for breast lesions were our study subjects. Women who have been already treated for malignancy earlier were excluded from the study. The data was entered in MS excel and descriptive statistics were applied.

RESULTS

The breast lesions encountered in the present study were classified in following categories: Inflammatory, non-inflammatory & non- neoplastic and malignant

[6]. Out of all cases, most common lesions were benign (38.0%; 76/200), followed by non-inflammatory & non-neoplastic (35.5%;71/200) and inflammatory (6.0%). Malignancy was seen in 20.5% of the cases according to histopathology reports. **[Table 1]**

Table-1: Distribution of breast lesions (n=200).

Lesions	Frequency	Percent
Inflammatory	12	6.0%
Non-inflammatory & Non-neoplastic	71	35.5%
Benign	76	38.0%
Malignant	41	20.5%
Total	**200**	**100%**

Table-2: Age distribution of breast lesions.

Age group	Non-malignant (%)	Malignant lesions (%)	Total (% of Total)
≤20 years	29 (100)	0 (0)	29 (14.5)
21-30	60 (95.2)	3 (4.8)	63 (31.5)
31-40 years	35 (71.4)	14 (28.6)	49 (24.5)
41-50 years	18 (48.6)	19 (51.4)	37 (18.5)
51-60 years	17 (80.9)	4 (19.1)	21 (10.5)
>60 years	-	1 (100)	1 (0.5)
Total	**159 (79.5)**	**41(20.5)**	**200 (100)**

The overall mean age of patients with breast lesion was 34.5 years, with a wide range of 13-67 years. Maximum number of patients, 63 cases (31.5%) was between 21-30 years. [**Table 2]** Out of 159 non-malignant lesions, maximum age-group affected was 21-30 years (37.73%; 60/159) while among 41 malignant cases, the age group affected most was 41-50 years (46.34%; 19/41).

Table-3: Distribution of non-malignant breast lesions.

Lesions	Frequency	Percent
Inflammatory	12	7.55%
Fibroadenoma	91	57.23%
Fibrocystic disease	15	9.44%
Fibroadenosis	26	16.35%
Benign Phylloides	2	1.26%
Gynecomastia	11	6.92%
Duct Pappiloma	2	1.26%
Total	**159**	**100%**

Out of 159 cases of non-malignant lesions the commonest was of fibroadenoma (57.23%), followed by fibroadenosis (16.35%) and fibrocystic disease (9.44%). **[Table 3]** Overall the most common lesion was fibroadenoma (45.5%; 91/200) and it occurs mostly in second and third decade of life with mean age of 27 years. Gynecomastia was seen in 5.5% (11/200) patients.

Table-4: Distribution of malignant breast lesions.

Lesions	Frequency	Percent
CA breast in the benign lumps	6(n=200)	3%
Invasive carcinoma of no special type	30	73.17%
Medullary carcinoma	6	16.63%
Invasive papillary carcinoma	2	4.88%
Metastatic carcinoma	2	4.88%
Apocrine carcinoma	1	2.44%
Total	**41**	**100%**

According to histopathology report, 20.5% (41/200) cases were of malignant type. Only 3% were malignant among the benign masses. The most common type (73.17%; 30/41) of malignancy observed was invasive carcinoma of no special type (NST) followed by medullary carcinoma i.e. 16.63% (6/41). Invasive papillary and metastatic carcinoma as present in 4.88% of cases each. **[Table 4]**

DISCUSSION

Breast cancer is difficult to detect the disease in early stages and majority of patients seek medical advice when the disease has reached advanced stages [7]. The most common breast lesions in the present study were non-malignant (79.5%) Malignancy was seen in 20.5% of the cases according to histopathology reports. Our findings are similar to those by Olu-eddo *et al* [8]. In this study, the ratio of benign to malignant lesions was 3.9:1. Kumar M *et al* observed that in Indian rural population the benign breast diseases are five to ten times more common than malignant diseases while Aisha Memon*et al* referred that in West Bengal the ration is as high as 10:1 [9,10]. The overall mean age of patients with breast lesion was 34.5 years with maximum number of patients (31.5%) in the age group of 21-30 years. Among non-malignant lesions patients, maximum age- group affected was 21-30 years while among malignant cases, the age group affected most was 41-50 years. This is in agreement with the observation by Hankey BF *et al*. This shows that there is a difference in mean age of patients of breast lesions in developed and developing countries [11,12]. Christiana *et al* found the peak-age frequency of occurrence in India is at least a decade earlier than that described in the western literature. These results point toward racial differences in the molecular profiles of breast carcinoma [13,14]. In this study, 21.5% lesions were malignant. Shanthi V *et* al found 28% malignant pathology while Pradhan*et al* in Nepal found upto 15.5% cases were malignant [15,16]. Fibroadenoma was most common lesion with 45.5% cases. Among non-malignant fibroadenoma (57.2%) was followed by fibroadenosis and fibrocystic disease. Most of the available literature on benign breast diseases observed that frequency of fibroadenoma ranged from 46.6% to 55.6%. It occurs mostly in second and third decade of life, consistent with finding from other studies [17-19]. In this study, 6% of breast lesions were of inflammatory nature. This result is less as compared to past studies and all the lesions histologically were of chronic non- specific mastitis [20-22]. Muqtadir et al and Mudholkar et al who reported 78.79% and 88% of involvement as scirrhous carcinoma [23,24]. The most common breast lesions are benign lesions and the commonest benign lesion is fibrodenoma. Invasive carcinoma of no special type (NST) is most common malignancy and found to be more common in 41-50 years of age group.

CONCLUSION

Breast lesions present itself in the late stages of malignancy due to lack of awareness. Awareness should be generated among women to reduce the morbidity and mortality with breast lesions.

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