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Incidence of malignancy in patients presenting with breast lump in a rural Teritary centre: A retrospective study

[1]Dr. Avinash M S N V, [2]Dr. Murakonda Sowmya Chowdary, [3]Dr.Krishna Prasad K

[1-3]Department of General Surgery, RJL Hospital and Research Centre, Tamaka, Kolar

Corresponding Author: Dr. Avinash M S N V, Junior Resident, Department of General Surgery, RJL Hospital and Research Centre, Tamaka, Kolar

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Abstract

Background: Carcinoma of breast (CA breast) is most commonly encountered malignancy in females in surgical OPD in rural setup. It is all 2nd leading cause of death in women. It accounts for 22% of all female cancers worldwide and approximately 42% in the developing countries. Breast cancer refers to cancers originating from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the ducts with milk. Breast cancer is about 100 times more common in women than in men, although males tend to have poorer outcomes due to delays in diagnosis. Risk factors for CA breast include hereditary (genetics), nulliparity, late pregnancy, early menarche, family history of breast or ovarian carcinoma, use of oral contraceptive pills, prolonged hormone replacement therapy, in utero exposure, breast radiation, dietary habits, alcohol intake , smoking, and lack of physical activity. Diagnosis of breast carcinoma includes clinical evaluation, radiological investigations (USG breast, Mammography) and FNAC of the lump. Histopathology examination is the confirmatory of diagnosis. Since carcinoma breast is associated with a good prognosis if identified early , this study was conducted to find out the frequency of carcinoma breast occurring in a rural tertiary centre so as to recognize the magnitude of the disease, to emphasize on awareness , early diagnosis and treatment

Methods: We performed a single centre, retrospective all patients admitted at the RLJ Hospital for complaints of breast lump between July 2018 and July 2021 are included in this study. The outcome of the study was based on FNAC of the patient and further confirmed on histology.

Keywords: Breast Lump, Breast Malignancy

Introduction

Carcinoma of breast (CA breast) is most commonly encountered malignancy in females in surgical OPD in rural setup. It is all 2nd leading cause of death in women[1]. It accounts for 22% of all female cancers worldwide and approximately 42% in the developing countries[2]. Breast cancer refers to cancers originating from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the

ducts with milk. Breast cancer is about 100 times more common in women than in men, although males tend to have poorer outcomes due to delays in diagnosis[3].

Risk factors for CA breast include hereditary (genetics), null parity , late pregnancy, early menarche, family history of breast or ovarian carcinoma, use of oral contraceptive pills, prolonged hormone replacement therapy, in utero exposure, breast radiation, dietary habits, alcohol intake, smoking, and lack of physical activity[4]. Its incidence rises with increase in age but also seen in younger women. Approximately 7% of all breast cancers are diagnosed in women <40 years of age and less than 4% below the age of 35 years. Diagnosis of breast carcinoma includes clinical evaluation, radiological investigations (USG breast, Mammography) and FNAC of the lump. Histopathology examination is the confirmatory of diagnosis[5].

Since carcinoma breast is associated with a good prognosis if identified early , this study was conducted to find out the frequency of carcinoma breast occurring in a rural tertiary Centre so as to recognize the magnitude of the disease, to emphasize on awareness , early diagnosis and treatment[6]

Objective of the Study

1. The objective of this study is to increase awareness regarding breast cancer, its incidence and presentation , and emphasize on early diagnosis and treatment in rural tertiary centre.

Materials and Method

This is an observational retrospective stud, 90 patients presented to OPD of Department of General Surgery with complaints of lump in breast over period of July 2018 to July 2021 in, R.L. Jalappa Hospital, Kolar were included. Demographic features of the patient's i.e. Name, age, marital status and address were noted. The demographic features and findings of FNAC were recorded on the proforma to determine the frequency of patients with malignant disease.

Diagnosis of malignancy was further confirmed on histology.

Inclusion Criteria

All Patients presented to OPD of Department of General Surgery with complaints of lump in breast over period of July 2018 to July 2021 in, R.L. Jalappa Hospital, Kolar.

Exclusion Criteria

Patients who all already diagnosed or operated for breast carcinoma are excluded in this study

Statistical Analysis

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions. Chi-square test was used as test of significance for qualitative data. Continuous data was represented as mean and standard deviation.

Graphical representation of data: MS Excel and MS word was used to obtain various types of graphs such as bar diagram, Pie diagram.

P value (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Statistical software: MS Excel**,** SPSS version 22 **(**IBM SPSS Statistics, Somers NY, USA) was used to analyze data.

Results

Age range of 90 female subjects of lump breast, under study in a period of three years in General surgery department of RLJH , Tamaka , A tertiary

care centre was included in the study with mean age 52 years. Highest number of patients falls between age group 50-60 years i.e 30 patients (33%) followed by 40-50 years age group i.e 25 patients (28%). However 15% of subject's i.e 14 in numbers are <30years of age >60 years account to 12% i.e 11 subjects. 11% of subjects are in the category of 30-40 yrs of age group (10 in number) (Table I).

Maximum number of subjects i.e 44% gives duration of lump for >12 months followed by 31% of subjects with duration of 6-12 months. 25% of subjects gives duration of <6months. (Table 2). Out of 90 breast lumps, 22 lumps (24.4%) were benign and 68(75.6%) malignant (Table 3).

Amongst malignant group 28subjects (42%) occurred in age group 40-50 years, 18 subjects (26%) in age group of 50-60 years , 10 subjects (14%) in age group of 30-40years and >60 years and 2 subjects (3%) in age group 30 years and less. (Table 6). Regarding type of malignancy 38 (56%) were ductal carcinoma, 20(29%) medullary carcinoma, 8 (12%) mucinous and 2(3%) malignant phylloides (Table 7). Amongst the benign lumps, 12(56%) were fibroadenomas, 6(27%) fibrocystic changes, 2(9%) inflammatory lesions, 1(4%) pyogenic abscess and 1(4%) galactoceles (Table 8).

Table 1: Distribution of patients by age, N=90

Age	Numbers	Percentage
<30years	14	15%
30-40years	10	11%
40-50years	25	28%
50-60years	30	33%
>60 years	11	12%

Fig: 1 distribution of patients by age

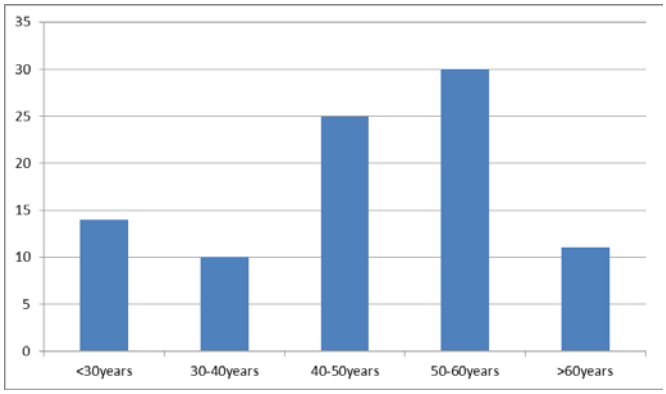


Table 2: Duration of Lump, N=90

Duration	Number	Percentage
<6months	22	25%
6months – 12 months	28	31%
>12 months	40	44%

Fig. 2: duration of lump

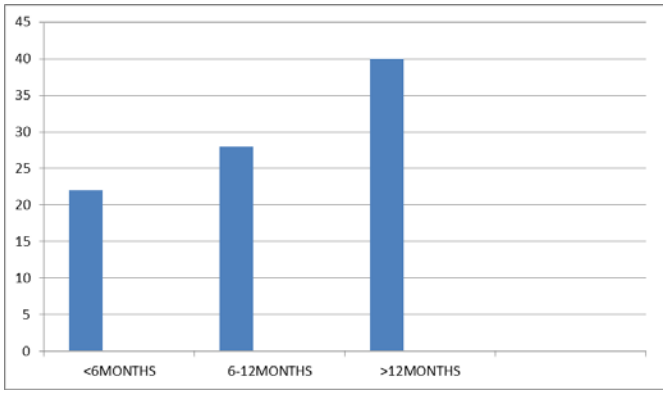


Table 3: number of benign and malignant lumps diagnosed on FNAC, N=90

Breast lumps	Number	Percentage
Benign	22	24.4%
Malignant	68	

Fig. 3: number of benign and malignant lumps diagnosed on FNAC

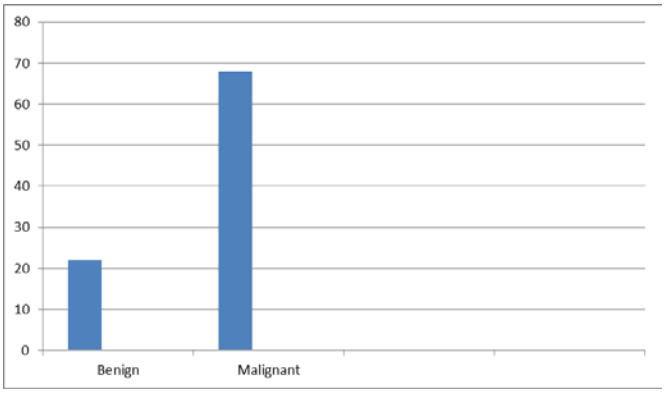


Table 4: duration of breast feeding, N=90

Duration	Number	Percentage
3 months	6	6.6%
3-6 months	24	26.6%
6-12months	49	54.4%
>12months	11	12.4%

Fig. 4: duration of breast feeding

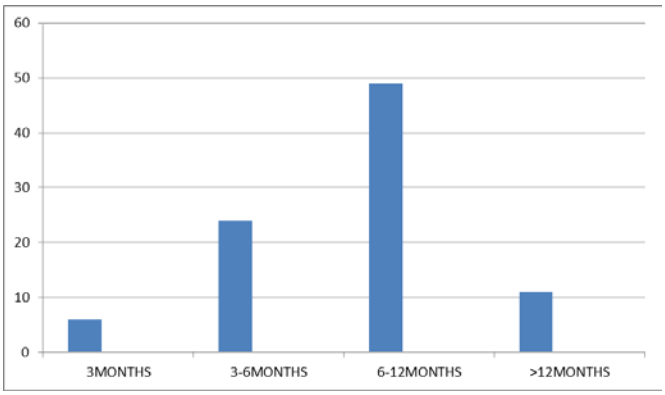


Table 5: Family History, N=90

Family History	Number	Percentage
Present	36	40%
Absent	54	60%

Fig. 5: Family History

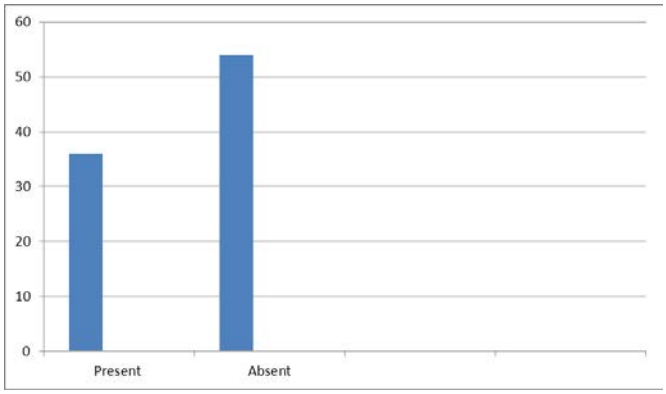


Table 6: distribution of patients with malignant lumps by age, N=68

Age	Number	Percentage
<30years	2	3%
30-40years	10	14%
40-50years	28	42%
50-60years	18	26%
>60 years	10	14%

Fig. 6: distribution of patients with malignant lumps by age

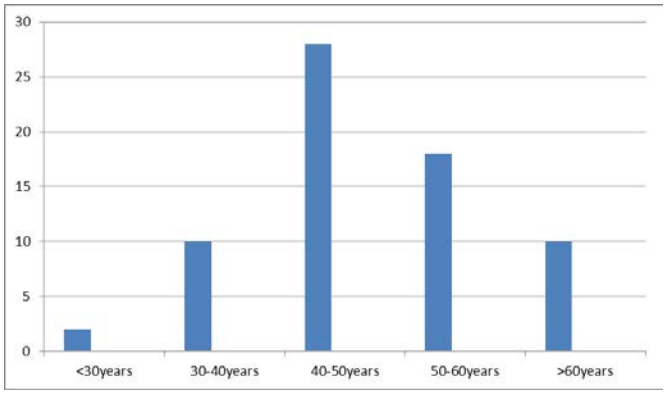


Table 7: types of malignancies diagnosed on FNAC, N=68

Type	Number	Percentage
Ductal carcinoma	38	56%
Medullary carcinoma	20	29%
Malignant phylloides	2	3%
Mucinous	8	12%

Fig 7: Types of malignancies diagnosed on FNAC

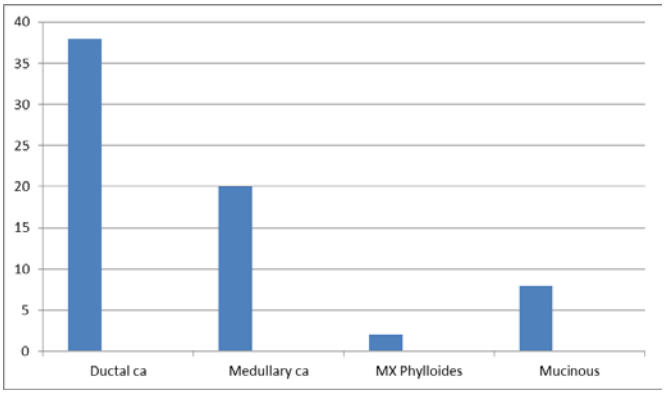
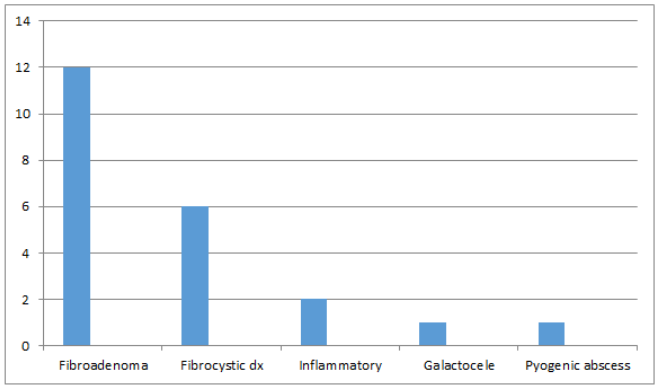


Table 8: Types of benign lumps diagnosed of FNAC, N=22

Type	Number	Percentage
Fibroadenoma	12	56%
Fibrocystic disease	6	27%
Inflammatory lesion	2	9%
Galactocele	1	4%
Pyogenic abscess	1	4%

Fig 8: Types of benign lumps diagnosed of FNAC



Discussion

Breast cancer is the most common cause of cancer related deaths worldwide and in recent years is emerging as the commonest female malignancy in the developing Asian countries.

Many studies have been carried out to prove the emerging rise of incidence of malignancy in patients presenting with breast lump in rural setup.

The results of the present study showed that the maximum number of patients under 50-60 years of Age group.

Study carried out at Banaras Hindu University, India, in 1991, 1315 breast lesions in women up to 40 years of age were analyzed and out of these 508 lesions were malignant (38.6%)[7]

The results of our study are further strengthened by a cross sectional study carried out in Tehran from 1996 to 2000, wherein Hirarchi et al showed that the highest frequency (31.8%) of malignancies was in the 40 - 49 age group.

The maximum number of malignant breast lumps fall under 40-50 years age groups. The results of our study showed that 68% of patients with breast lumps turned malignant which is quite a high proportion.

This study showed that 56% of the malignant lumps were ductal carcinoma, 29% were medullary carcinoma , 3% were malignant phylloides and 12% were mucinous type which was similar to study at Agha Khan University showed that out of all the malignancies, 91% were ductal carcinoma, 0.74% mucinous carcinoma and 0.9% malignant phylloides. The rest were of other types[8]

This study showed that amongst the benign cases, fibroadenoma was the commonest (56%), followed by fibrocystic disease(27%), inflammatory lesions (9%) followed by galactocele and pyogenic abscess which accounts 1%. Siddiqui et al showed that in their results fibroadenoma was 48.3%, fibrocystic disease 16% , abscess 20% and granulomatous mastitis 4%. Our findings are also close to Khanna et al and Agarwal et al[9], who found fibroadenoma to be the commonest benign tumor[10].

Conclusion

Incidence of malignancy is more in patients presented with breast lump compared to benign lesions in rural tertiary centre where study was conducted. More public awareness should be created among the rural areas by using electronic and paper media. Early diagnosis and management improves morbidity and mortality associated with breast carcinoma and many lives can be saved from a NIGHT MARE called BREAST CANCER.

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