



A COMPARATIVE STUDY OF BREAST LUMPS IN PREMENOPAUSAL AND POST MENOPAUSAL WOMEN USING TRIPLE ASSESSMENT IN BANGALORE MEDICAL COLLEGE AND RESEARCH INSTITUTE

Breast Surgery

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ABSTRACT

Background: The most common type of breast disease in women is benign breast diseases. Diagnosis is made by triple assessment. Early menarche and late menopause are a risk factor for developing cancer of breast. Therefore, it is essential to identify carcinoma breast and its type among premenopausal and postmenopausal women by differentiating it from benign condition of breast. **Objectives:** To determine the frequency of benign and the malignant breast lumps in premenopausal and postmenopausal women using triple assessment. **Methods:** A total of 100 female patient with breast lumps was enrolled in the study who attend general surgery OPD and IPD. All study patients were subjected to triple assessment. Patient was then segregated based on their menstrual history as premenopausal and postmenopausal, and the result was analysed. **Results:** Among total 100 patients, 62 patients had a benign breast disease, 38 patients had a malignant breast disease. In Premenopausal women, 86.2 % patients had a benign disease. In post-menopausal women, 28.5% patients had benign disease. In pre-menopausal women, 13.7% patients had malignant breast disease. In post- menopausal women, 71.4% patients had malignant breast disease. Among malignant disease of breast 63.15% were invasive ductal carcinoma of the breast, 34.21% were invasive lobular carcinoma of the breast and 1% was inflammatory carcinoma of the breast. **Conclusion:** In my study malignant breast disease is more common in post- menopausal women. Benign breast disease is more common in premenopausal women. Fibroadenoma was most common type of breast lump among premenopausal women. Fibrocystic disease of breast is the most common benign breast disease among postmenopausal women. In post-menopausal women, the most common malignant breast disease was invasive ductal carcinoma breast NST/NOS.

KEYWORDS

INTRODUCTION:

The most common type of breast disease in women is benign breast diseases. It occurs in 30% of women in their life time. [1] 90% of the women suffer from benign breast disease when they have breast related problems. [2] Breast cancer contributes to 25% of all cancer worldwide. In India it occurs with age adjusted rate of 25.8 per 100000 women. It is ranked the number one cancer among Indian females.[3] Diagnosis of the disease of the patient presenting with complaints of breast lump or symptoms suspicious of malignancy is made by triple assessment which includes clinical assessment, radiological imaging, and tissue sampling either by cytological or histological.[1] Benign breast disease includes fibroadenoma, phyllodes, cyst, fibrosis, breast abscess, adenosis, epithelial hyperplasia, sclerosing adenosis, complex sclerosing lesion, papilloma, atypical lobular hyperplasia and atypical ductal hyperplasia. Malignant breast disease includes ductal carcinoma, lobular carcinoma, colloid carcinoma, mucinous carcinoma, medullary carcinoma, tubular carcinoma and inflammatory carcinoma.[4]

Breast cancer is also global health problem with more than 1 million cases of breast cancer diagnosed worldwide. [5] Incidence of breast cancer increases with age. Usually at the age of 90 years around 20% of the women are affected and it is rare before the age of 20 years. Breast is a dynamic structure which undergoes changes throughout a women reproductive life and also undergoes cyclical changes throughout the menstrual cycle.[1] Early menarche and late menopause is a risk factor for developing cancer of breast.[6] Menopause itself does not cause cancer but increases the risk of developing cancer. The risk of developing breast cancer doubles with menopause after the age of 55 years.[5] As the age advances the percentage of women attaining menopause increases, hence the risk of developing cancer of breast increases in post menopause. Therefore, it is essential to identify carcinoma breast and its type among premenopausal and post-menopausal women by differentiating it from benign condition of breast. Triple assessment of breast lump includes clinical, radiological, histopathological assessment of the breast. For histological diagnosis fine needle aspiration cytology (FNAC) or core needle biopsy is preferred method. There are very few articles comparing benign and malignant nature of breast lump among premenopausal and post-menopausal women. Hence the study is important to understand the types of benign and malignant breast lump for early diagnosis and

management among premenopausal and post-menopausal women.

AIMS AND OBJECTIVES

To determine the frequency and types of benign and the malignant breast lumps in premenopausal and postmenopausal women using triple assessment

MATERIALS AND METHODS

1. **Source of data:** IPD of General Surgery Dept, BMCRI, and attached Hospitals.
2. **Study design:** Surgical Audit
3. **Study period:** December 2022 to December 2023.
4. **Place of study:** Bangalore Medical College and Hospitals attached.
5. **Sample size :** 100

Inclusion Criteria

1. Patient willing to give informed consent.
2. Female patient having amenorrhea for the past 12 months are considered as post-menopausal and rest all patient are considered premenopausal.
3. In this study, cessation of menstruation by only natural cause is considered.

Exclusion Criteria

1. Patient not willing to give informed consent.
2. Patient history of cancer of other organ apart from cancer breast.

METHODOLOGY

- After obtaining approval and clearance from the institutional ethics committee, the patients fulfilling the inclusion criteria will be enrolled for the study after obtaining informed consent. A total of 100 female patient with breast lumps will be enrolled in the study who attend general surgery OPD and IPD. Case record form with follow up chart will be filled.
- All study patient will be subjected to triple assessment i.e., clinical assessment which includes age and physical breast examination, radiological assessments includes sonomammography and mammography, and pathological assessment
- Patient will then be segregated based on their menstrual history as premenopausal and postmenopausal women and result will be analysed.

Results of the study will be categorized into 4 groups

- Group 1- Proportion of premenopausal women with benign breast disease.
- Group 2- Proportion of premenopausal women with malignant breast disease.
- Group 3- Proportion of postmenopausal women with benign breast disease.
- Group 4- Proportion of postmenopausal women with malignant breast disease.

RESULTS

Age Wise Distribution

Age of the patients with breast lumps studied ranged between 18 years and 69 years. Mean age of patients was 39.62 years. Among all the patients, 34% of patients were having breast lump between 40 to 50 years, 30% of patients were aged 30-40 years, 17 % were between the age 18-30 years ,16% were between the age of 50-60 years. 3% of the patients were more than 60 years. Out of total 100 patients, overall, 43% patients presented with history of 3-5 months duration, 18% of patients had presented with complaints of more than 9 months duration, 28% of patients presented with 7-12months duration of symptoms and 11% of patients presented with complaints for duration of more than 1 year. Youngest patient aged 18 years. Oldest patient aged 69 years. Among women breast lumps 58 women (58%) were premenopausal and 42 women(42%) were post-menopausal .

Clinical Examination Findings

All patients were clinically examined for the lump and axillary nodes. Out of the total 100 patients around 61 patients were found to have probably a benign breast disease and the rest 39 patients were found to have probably malignant breast disease.

Ultrasound Findings

Among the total 100 patients studied , 40 patients were reported as BIRADS 3 and 20 patients were BIRADS 2, 18 patients were reported as BIRADS 4c, 15 patients were reported as BIRADS 4b, 7 patients were reported as BIRADS 4a. All patients were suggested HPE correlation.

Histopathological Findings

Final diagnosis based on FNAC, core biopsy and post operative specimen histopathological examination Among total 100 patients 62 patients had a benign breast disease. 38 patients had a malignant breast disease.

Percentage Of Benign Breast Disease In 2 Study Groups

In Pre-menopausal women, 86.2% patients had a benign disease.
In post-menopausal women, 28.5% patients had a benign disease.

Percentage Of Malignant Disease In 2 Study Groups.

In pre-menopausal women, 13.7% patients had malignant breast disease.
In post-menopausal women, 71.4% patients had malignant breast disease.

Among total 100 patients

27 patients were diagnosed as fibroadenoma.
27 patients were diagnosed as fibrocystic disease of breast.
24 patients were diagnosed as invasive ductal carcinoma of breast.
13 patients were diagnosed as invasive lobular carcinoma of breast.
3 patients were diagnosed as benign phyllodes tumor of breast.
2 patients were diagnosed as galactocele.
1 patient was diagnosed as inflammatory carcinoma breast.
2 patient was diagnosed as lipoma of breast.
1 patient was diagnosed as intraductal papilloma of breast

Among Malignant Disease Of Breast

24 cases (63.15%) were invasive ductal carcinoma of the breast.
13 cases (34.21%) were invasive lobular carcinoma of the breast.
1 case (2.63%) was inflammatory carcinoma of the breast.

Distribution of malignant disease in 2 groups.

30 cases (78.94% of total number of malignant disease) belonged to post-menopausal group.
8 cases (21.05% of total number of malignant disease) belonged to premenopausal group.

Distribution Of Benign Disease In 2 Groups.

12 cases (19.35% of total number of benign breast disease) belonged to post- menopausal group.

50 cases (80. 64% of total number of benign breast disease) belonged to pre- menopausal group.

Among premenopausal women with benign diseases

26 patients (52%) were diagnosed as fibroadenoma.
16 patients (32%) were diagnosed as fibrocystic disease of breast
4 patients (8%) were diagnosed as benign phyllodes tumor
2 patients (4%) were diagnosed as galactocele
2 patient (4%) was diagnosed as lipoma of breast

Among pre-menopausal women with malignant disease

7 patients (77.7%) were diagnosed as invasive ductal carcinoma
1 patients (22.22%) were diagnosed as invasive lobular carcinoma.

Among post-menopausal women with benign disease

11 patients (91.6%) were diagnosed as fibrocystic disease of breast
1 patient (8.3%) was diagnosed as intraductal papilloma.

Among postmenopausal women with malignant breast disease

19 patients (63.33%) were diagnosed as invasive ductal carcinoma.
10 patients (33.33%) were diagnosed as invasive lobular carcinoma.
1 patient (3.33%) was diagnosed as inflammatory carcinoma.

DISCUSSION

The presenting complaint of all patient was a lump in the breast and few patients had a pain in the lump. Associated features like dimpling, nipple retraction, asymmetry of breast was present in about 24 patients. Nipple discharge was present in about 8 patients. About 52 patients had a lump in the right breast and the rest of the patients had a lump in the left breast. Lump was present in most of the patient in the upper outer quadrant in 70 % of the patient and outer inner quadrant of the breast 25 % of the patient. Histopathological study of either core needle biopsy or post operative specimen was the confirmatory test in all the patients. Fine needle aspiration cytology was done in all the patients. Core needle biopsy was done in all patient for confirming FNAC diagnosis and for ER, PR, Her 2 neu receptor status and Ki67 index. All patients were subjected to ultrasound mammography of the breast. By ultrasound benign, suspicious lesions and lesions highly suggestive of malignancy were identified and BIRADS category was given. Cystic or solid nature of the lesion were also identified.

In selected patients' mammogram were taken. Abdominal ultrasound, chest x-ray radiograph, long bone x-ray radiograph, complete hemogram, renal function tests, and liver functions tests were done as a part of metastatic work up in patients with malignant breast disease. Invasive ductal carcinoma NST is the most common malignant breast disease in general population (70%), tubular (2%), colloid (2%), medullary (5%), cribriform (2%), papillary (1%). Invasive lobular carcinoma is second most common (10%) Out of the total 100 patients studied 62% of the patients had a benign breast disease and the rest had a malignant breast disease. In pre-menopausal women 86.2% of the patients had a benign disease and rest 13.7% had a malignant breast disease. In post-menopausal women, 28.5% of patients had a benign breast disease and rest 71.4% patients had a malignant breast disease. Out of the total 100 patients 27 patients had fibrocystic disease of breast which was the most common benign disease in the study. Among patients with malignant breast disease, invasive ductal carcinoma breast was the most common malignancy with 25 patients which is followed by invasive lobular carcinoma with 12 cases. The percentage of invasive lobular carcinoma was higher in study group when compared to the breast malignancy in general population. Among pre-menopausal women, 50 patients had a benign breast disease with most common benign breast disease being fibroadenoma with 26 cases. The most common malignant breast disease in premenopausal women was invasive ductal carcinoma which was seen in 7 patients and followed by invasive lobular carcinoma seen in 1 patient. The percentage of invasive lobular carcinoma was very high in study group when compared to malignant breast disease in general population. Among post-menopausal women, 12 patients had a benign breast disease and 30 patients had a malignant breast disease. Most common benign disease in post- menopausal women was fibrocystic disease of breast seen in 11 cases. The most common malignant breast disease was invasive ductal carcinoma breast seen in 20 cases, second most common was invasive lobular carcinoma seen in 9 cases. Age at menarche was almost similar in both premenopausal and postmenopausal women. Carcinoma in situ was not reported in any

patients. The prevalence of malignant breast tumors was found to be higher in post-menopausal women than in pre-menopausal women.

This study helped in the early detection and treatment of carcinoma breast. It helped in identifying the histological type of carcinoma breast thereby allowing to detection of multifocal and multicentric lesions in the same or opposite breast. This study showed an increased incidence of lobular carcinoma breast as compared to the general population. Lobular carcinoma breast is associated with poor prognosis, and more recurrence due to its multifocal and multicentric nature.

CONCLUSION

The results obtained in this study was consistent with statistics in the general population in India except for the higher percentage of invasive lobular carcinoma in study group, both in premenopausal and postmenopausal women. The study helped in early detection and treatment of Carcinoma breast among pre and postmenopausal women. It helped in identifying the histological type of carcinoma of breast there by allowing to detect multifocal and multicentric lesions in the same or opposite breast. This study helped to differentiate nature of breast lump among women based on menstrual status. This study shows an increased incidence of lobular carcinoma of breast compared to general population. Lobular carcinoma breast is associated with poor prognosis, more recurrence due to its multifocal and multicentric.

SUMMARY

In my study the most common breast diseases were fibroadenoma, fibrocystic disease of breast, invasive ductal carcinoma, invasive lobular carcinoma, phyllodes tumor, galactocoele. Malignant breast disease is more common in postmenopausal women (78.94% of malignant cases). Benign breast disease is more common in premenopausal women (80.64% of all benign cases). Fibroadenoma of breast is the most common benign breast disease among all women (27 out of 100 cases). Invasive ductal carcinoma NST breast disease is the most common malignant breast disease among all women (24 out of 100 cases). There is a higher incidence of invasive lobular carcinoma (34.21% of all malignant cases in study group) in study population when compared with patients with malignant breast disease in general population in India (10% of malignant breast disease in general population).

In premenopausal women, the most common benign breast disease is fibroadenoma (26 cases, 52%). The malignant breast disease were invasive ductal carcinoma (7 cases, 77.7%) and invasive lobular carcinoma (1 cases, 22.22%). There is very high percentage of invasive lobular carcinoma when compared to patients with malignant breast disease in general population in India. In post-menopausal women, the most common benign breast disease is fibrocystic disease of breast (11 patients, 91.6%). The most common malignant breast disease was invasive ductal carcinoma breast (24 patients, 63.33% of malignant breast patients in postmenopausal women). There was higher percentage of invasive lobular carcinoma (10 patients, 33.33% of malignant patients in postmenopausal women) when compared to patients with malignant breast disease in general population in India (10 % of total cases).

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