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Original Research Article

Clinicopathologic Analysis of Breast Lumps

Shashi Upreti*

Associate Professor, Department of Pathology, Shaikhul Hind Maulana Mahmood Hasan Medical College, Saharanpur, U.P., India

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***Corresponding author:** Shashi Upreti

Abstract

***Background*:** Breast diseases are showing a rising trend. The present study was conducted with aim of Clinicopathologic analysis of Breast Lumps. ***Materials & Methods*:** The present study was conducted on 130 breast specimens obtained from surgery department. The method of biopsy used was either open (excision and incision) or tru-cut needle biopsies depending on size and clinical parameters at presentation. ***Results*:** Maximum patients were seen in age group 40-60 years (70) followed by 20-40 years (40) and >60 years (20). Histological diagnosis was fibroadenoma in 49, fibrocystic disease in 20, benign phyllodes in 11, duct ectasia in 6, chronic mastitis in 15, granular cell tumour in 10, neurofibromas in 2, lactating adenomas in 4, lipomas in 6 and invasive lobular carcinomas in 22. Maximum masses were seen in upper inner quadrants (30%) followed by lower outer quadrants (24%), upper outer quadrants (12%), entire breast (11%), lower inner quadrants (10%), central (8%) and middle quadrants (5%). The difference was significant (P< 0.05).
***Conclusion*:** Most common breast mass was fibroadenoma followed by invasive lobular carcinomas. Most common site was upper inner quadrant.

Key words: Breast, fibroadenoma, Invasive lobular carcinomas.

INTRODUCTION

Breast diseases are showing a rising trend and as a result there is considerable interest in the clinicopathological studies of breast masses in various populations. In recent decades, gains of life expectancy from industrialization have changed previous trends of disease in developing nations, creating a shift from diseases of pestilence and infections to those of cancers, trauma, cardiovascular disease and mental illness [1]. Breast diseases include inflammatory, benign and malignant conditions. Around 200,000 cases of breast diseases are diagnosed annually. Breast diseases are more prevalent among females as compared to males and the pattern of breast diseases and their etiology varies among different countries and ethnic groups. Regional heterogeneity highlights the importance of understanding local burden of diseases and setting goals and targets, taking such patterns into account [1-4].

Benign breast disease has a prevalence and impact on women's quality of life. 50% of women will develop some form of benign breast disease during their lifetime. However, 1 in 9 of those presenting with a breast lump will be diagnosed as breast cancer. Since it is not as yet preventable, its early detection gives the patient the best chance of a cure. The risk factors for breast cancer are numerous and can essentially be divided into hormonal, non-hormonal and genetic risk factors. Patients with a benign lump but having a family history of breast cancer also have an associated increased relative risk for cancer. 50% of breast cancer patients do not have any specific risk factors [6,7]. The present study was conducted to determine presentations and pathology of breast lumps.

MATERIALS & METHODS

The present study was conducted in the department of General pathology. It comprised of 130 breast specimens obtained from surgery department. Ethical approval was obtained from institute prior to the study. General information such as name, age, gender etc. was recorded. Hemoglobin level and urinalysis records were recorded. Chest and spine x-rays, abdomino-pelvic ultrasound and liver function tests were reserved for those with clinically suspicious malignant lesions or co-morbidities. The method of biopsy used was either open (excision and incision) or tru-cut needle biopsies depending on size and clinical parameters at presentation. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table-1: Distribution of patients

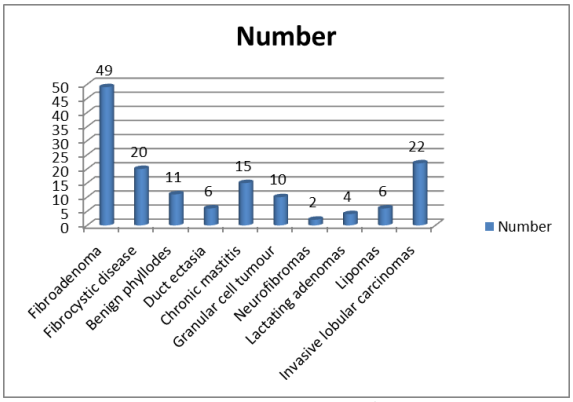
Age groups (Years)	Number	P value
20-40	40	0.01
40-60	70	
>60	20	

Table I shows that maximum patients were seen in age group 40-60 years (70) followed by 20-40 years (40) and >60 years (20). The difference was significant (P< 0.05).

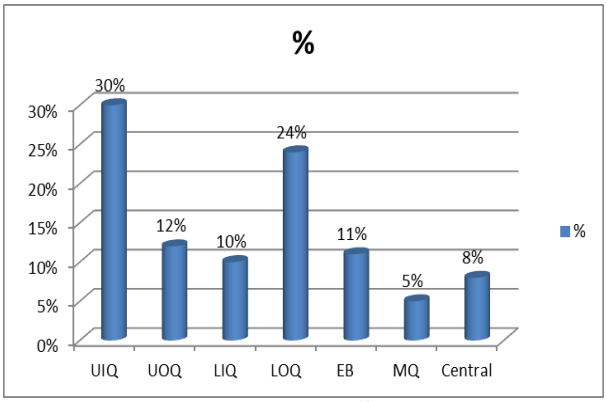
Table-2: Histological diagnosis of breast masses

Diagnosis	Number	P value
Fibroadenoma	49	0.01
Fibrocystic disease	20	
Benign phyllodes	11	
Duct ectasia	6	
Chronic mastitis	15	
Granular cell tumour	10	
Neurofibromas	2	
Lactating adenomas	4	
Lipomas	6	
Invasive lobular carcinomas	22	

Table II shows that histological diagnosis was fibroadenoma in 49, fibrocystic disease in 20, benign phyllodes in 11, duct ectasia in 6, chronic mastitis in 15, granular cell tumour in 10, neurofibromas in 2, lactating adenomas in 4, lipomas in 6 and invasive lobular carcinomas in 22. The difference was significant (P< 0.05).



Graph-1: Histological diagnosis of breast masses



Graph-2: Breast masses in different quadrants

Graph II shows that maximum masses were seen in upper inner quadrants (30%) followed by lower outer quadrants (24%), upper outer quadrants (12%), entire breast (11%), lower inner quadrants (10%), central (8%) and middle quadrants (5%). The difference was significant (P< 0.05).

DISCUSSION

Benign diseases can be classified as inflammatory, epithelial and stroma proliferations, neoplasm and developmental anomalies. Benign breast diseases are more prevalent as compared to malignant and inflammatory, as seen throughout the world. Fibroadenomas are in greater frequency among the population, constituting almost half of all cases of benign diseases. Incidence of benign lesions is common in the second decade reaching on its peak at fourth and fifth decade of life. Risk factors for benign and malignant breast diseases include low parity, nulliparity, low age at first birth and late menopause, highlighting the fact towards excessive circulating estrogen levels. Breast screening programs have been implemented in many parts of the world. Many patients end up having unnecessary biopsies. Breast self-examination raises breast awareness but does not reduce breast cancer mortality. The most effective approach to screening is yet to be defined. Screening mammography is not done in the public health service. The present study was conducted to determine presentations and pathology of breast lumps.

In this study, maximum patients were seen in age group 40-60 years (70) followed by 20-40 years (40) and >60 years (20). We found that histological diagnosis was fibroadenoma in 49, fibrocystic disease

in 20, benign phyllodes in 11, duct ectasia in 6, chronic mastitis in 15, granular cell tumour in 10, neurofibromas in 2, lactating adenomas in 4, lipomas in 6 and invasive lobular carcinomas in 22.

Women have the option to get a clinical breast examination done by community physicians. Any breast abnormality detected is referred to the surgical department of the nearest hospital for evaluation. These breast lumps represents a heavy workload that the surgical department has to deal with, in a context of limited resources. The implementation of the triple diagnostic test to all breast lumps is not practicable as it would result in a delay in treatment. Hence, there is a compelling need for prompt assessment and triage of these patients to carry out early pathological examination on those patients that are more likely to have breast cancer. Aslam *et al* [8] found that there were 254 breast lesions, histologically diagnosed in 3 year review period. The overall mean age of patients with breast lesion was 25.18, SD ± 11.73 with a wide age range of 12–74 years. Most common cases identified are benign 191(75.3%), followed by inflammatory 30(11.8%) and malignant lesions 30(11.8%). Most patients presenting with the complaint of pain have diagnosis of fibroadenoma 24 (63.2%) while patient with complain of lump also have the most common diagnosis of fibroadenoma 147 (72.8%).

We found that maximum masses were seen in upper inner quadrants (30%) followed by lower outer quadrants (24%), upper outer quadrants (12%), entire breast (11%), lower inner quadrants (10%), central (8%) and middle quadrants (5%). Hislop et al[9] found that maximum masses were seen in upper inner quadrants (30%) followed by lower outer quadrants (24%), upper outer quadrants (12%), entire breast (11%), lower inner quadrants (10%), central (8%) and middle quadrants (5%). Raju *et al* [10] found that totally 95 women with breast lumps were studied at a tertiary teaching hospital in Mauritius between 2010 and 2012. 26 women were less than 30 years of age and rest were above 30. Majority discovered the lump by themselves and more than 80% presented to the care provider after 4 weeks. There were 29.5% of malignant lumps and 70.5% of benign lumps. Fibroadenoma was most common in women less than 30 years age group. Most of the cancers were in patients above 30 with one exception. The major risk factor that was significantly associated with malignancy was overweight.

CONCLUSION

Most common breast mass was fibroadenoma followed by invasive lobular carcinomas. Most common site was upper inner quadrant.

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