



STUDY OF SPECTRUM OF BENIGN BREAST DISEASES IN FEMALES OF REPRODUCTIVE AGE GROUP IN A TERTIARY CARE CENTRE- A ONE YEAR STUDY

Laboratory Medicine

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KEYWORDS

BACKGROUND

Breasts are subjected to various cyclical changes under the influence of hormones during the reproductive life of a woman.¹ Benign breast diseases constitute a heterogeneous group of breast lesions which includes inflammatory conditions, proliferative lesions of the epithelium and stroma, benign neoplasms and developmental abnormalities.² 30% of the women who suffer from benign conditions of the breast require treatment at some point in their life.³ These conditions are associated with morbidity and are 4-5 times more common than malignant lesions of the breast.⁴ In the western countries they are 10 times more common as compared to breast cancer.³

In the diagnosis of various breast lesions, histopathology plays an important role. It forms an integral part in the diagnosis, treatment and prognosis of breast diseases.²

AIM

This study aims to evaluate the percentage of various benign breast diseases in the females and the distribution in various age groups.

Methodology of the study

This retrospective data based study was conducted in the Department of Pathology, Assam Medical College and Hospital, from January 2022 to December 2022, on patients of reproductive age group who were diagnosed with benign breast lesions by Histopathology. Among the 82 cases, the findings were tabulated and analysed for the percentage of each lesion and their distribution in various age groups.

Inclusion criteria:

- Patients in the age group 15-49 years
- Patients diagnosed with benign breast diseases

Exclusion criteria:

- Patients not falling in the reproductive age group
- Patients diagnosed with malignant conditions of the breast

RESULTS AND OBSERVATIONS

In the present study, 82 cases were studied. The spectrum of Benign Breast Diseases diagnosed by Histopathology are analysed and expressed in the following tables -

Table 1: Spectrum of Benign Breast Diseases and their number/percentage

Benign Breast Disease	Number	Percentage
Fibroadenoma	47	57.3
Benign Phyllodes	12	15
Fibroadenoma with Usual Ductal Hyperplasia	10	12
Tubular Adenoma	06	7.3
Fibrocystic changes in breast	05	6
Galactocoele	01	1.2
Fat Necrosis	01	1.2

Among the 82 cases, Fibroadenoma was the most common lesion 57.3% (n=47).

Table 2: Age wise incidence of benign breast diseases

Age group	Number (Percentage)
≤ 20 years	10 (12%)
21-30 years	40 (48.7%)
31-40 years	26 (32%)
41-50 years	06 (7.3%)

In the present study, majority of the patients (n=40, 48.7%) with benign breast diseases were in the age group 21-30 years.

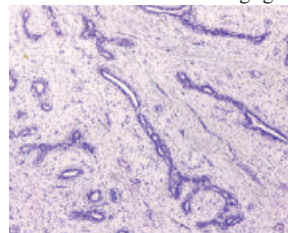


Fig 1: Microphotograph of fibroadenoma (low power)

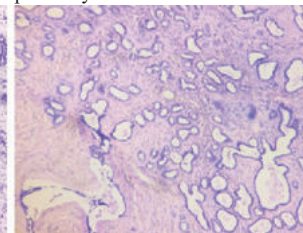


Fig 2: Microphotograph of fibrocystic changes in breast (low power)

Table 3: Clinical presentations of the patients with benign breast diseases

Clinical Presentation	Number	Percentage (%)
Lump in the breast	76	92.7
Lump and pain in the breast	5	6.1
Lump in the breast and discharge from the nipple	1	1.2

Lump in the breast was the most common presentation among the patients diagnosed with benign breast diseases.

LATERALITY

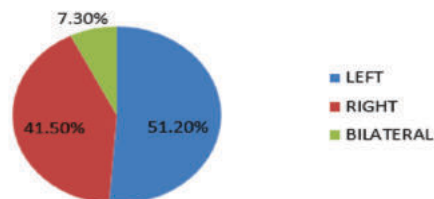


Fig 3- Laterality of benign breast diseases

Regarding the laterality of the breast diseases, 41.5% (n=34) were on right side, 51.2% (n=42) were on left side and 7.3% (n=6) were present bilaterally [Fig 3].

DISCUSSION

In the present study, majority of the patients with benign breast disease were in the age group 21-30 years and these findings are consistent with those of similar studies from Vimal M et al.⁵, the age incidence of benign breast diseases in present study as compared with other studies is shown in Table 4.

Study	Peak age incidence	Percentage in study population
Present study	21-30	48.7%
Vimal M et al ⁵	21-30	50%
Shukla et al ⁶	21-30	43%
Naveen et al ⁷	21-30	50%
Karki et al ⁸	21-40	67%
Dahri et al ⁹	21-30	44%

Fibroadenoma was the most common disease (57.3%) in the present study. This finding is consistent with the studies done by Vimal M et al.⁵, Naveen et al.⁷ and Khanzada et al.¹⁰. 12% of the cases were diagnosed as fibroadenoma with usual ductal hyperplasia. According to theories, Bcl-2 positive mesenchymal cells in the breast may be the

cause of fibroadenoma's development¹¹. A simple fibroadenoma does not increase the likelihood of acquiring malignancy, however a complicated fibroadenoma somewhat increases the risk of doing so¹². Usual ductal hyperplasia, also known as simple hyperplasia, refers to an increase in cell count without structural deformation or ductal contour distention¹³.

Benign Phyllodes tumour constituted 15% (n=12) of the cases in this study. Phyllodes tumour is a breast fibroepithelial tumour with a variety of modifications. It is typically challenging to distinguish benign phyllodes tumour from fibroadenoma. The most reliable distinguishers between lesions with recurrence and malignant behaviour include hypercellular stroma with cytologic atypia, increased mitoses, and infiltrative borders of the lesion¹³.

In the present study, Tubular adenoma constituted 7.3% (n=6) of the cases. It manifests as a single, solid lump that is well-circumscribed. On radiographs, it could look similar to a noncalcified fibroadenoma. Histologically, a sparsely cellular stroma is composed of tightly packed tubular or acinar structures that are quite regular in size and shape¹³.

Fibrocystic changes in the breast constituted 6% (n=5) of the cases in this study. Oestrogen preponderance over progesterone is a crucial factor in the pathogenesis, which is caused by hormonal imbalance¹⁴.

In the present study, there was 1 case (1.2%) each of galactoceles and fat necrosis. Galactoceles are benign and look like encysted milk product collections. Most often, they are found in the third trimester of pregnancy or during lactation¹⁵. Fat necrosis of the breast is a benign, inflamed, nonsuppurative condition of the adipose tissue¹³.

CONCLUSION

Benign breast diseases refers to a diverse spectrum of lesions that are more common than malignant ones in the breast and may exhibit a wide variety of symptoms.

Conflict Of Interest: None

Limitation Of The Study

Only lumpectomy specimens received in the Department of Pathology, Assam Medical College and Hospital during the period of study were included.

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