



STUDY ON PATTERN AND PREVALENCE OF BENIGN BREAST DISEASE IN NORTH INDIA

General Surgery

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ABSTRACT

Background: Benign breast diseases constitute a heterogeneous group of disorders including developmental abnormality, epithelial and stromal proliferation, inflammatory lesions and neoplasm. Benign breast lesions deserve attention because of their high prevalence, their impact on women's life and due to cancerous potential of some histological types. Treatment of BBDS is preservation of breast tissue as far as possible in contrast to traumatizing mutilating surgeries in breast cancers. **Objectives:** To study pattern and presentation of benign breast lesions over a period of 1 year in a tertiary care hospital of Lucknow, Uttar Pradesh. **Material and Methods:** This study of 180 cases of histologically diagnosed benign breast lesions was carried out in the Department of Pathology, at tertiary care teaching hospital with attached peripheral hospitals in a metropolitan city of western India from August 2018 to July 2019. **Results:** Out of 180 benign lesions, 175 (97.2%) were found in females and 05 (2.8%) were found in males. Commonest benign breast lesion was fibroadenoma (86.1%), followed by fibrocystic disease (2.2%) and gynaecomastia (2.8%). **Conclusion:** Fibroadenoma is the most common benign breast disease. Most of the patients presented with painless lump in the breast in upper outer quadrant of the breast. Histopathology plays an important role in the diagnosis of benign breast diseases.

KEYWORDS

Benign Breast Disease, Fibroadenoma.

Background:

Benign breast diseases constitute a heterogeneous group of disorders including developmental abnormality, epithelial and stromal proliferation, inflammatory lesions and neoplasm. It is the most common cause of breast problems in females and it is 10 times more common than breast cancer in the western world.¹ Benign breast lesions deserve attention because of their high prevalence, their impact on women's life and due to cancerous potential of some histological types.² Treatment of BBDs is preservation of breast tissue as far as possible in contrast to traumatizing mutilating surgeries in breast cancers. Hence awareness and terminologies of benign breast diseases should be there amongst general population and clinicians. Thus, Histopathology plays an important role in management of breast diseases.

BBDs in females are very interesting to the pathologist as they take on myriad forms of histological presentation. These variations pose a great challenge to the microscopic study of the pattern of disease and the unambiguous identification of sub-varieties. A thorough review of pathological findings in BBDs can provide insight into the exact nature of the lesion and will also serve as a means for timely decision making for the patient and the clinician.

AIM AND OBJECTIVES:

To study pattern and presentation of benign breast lesions over a period of 1 year in a tertiary care hospital of Lucknow, Uttar Pradesh.

MATERIAL AND METHODS:

In the present study 200 cases of histologically diagnosed benign breast lesions were taken and it was carried out in the Department of General Surgery and Pathology, at tertiary care teaching hospital of Lucknow with multiple attached peripheral hospitals in a metropolitan city of Northern India from August 2018 to July 2019. This study was approved by institutional ethical committee. Informed consent was taken. Detailed clinical data were noted as per the proforma with emphasis on history, physical examination and relevant investigations. The excision biopsy specimens, lumpectomy specimens received were examined grossly for their size, shape, colour and consistency. Cut surfaces were noted for colour, size, and secondary changes such as necrosis, cystic degeneration, haemorrhage and fibrosis. Sections were taken, processed and stained with routine haematoxylin and eosin stain. Detailed microscopic examination was undertaken for histopathological diagnosis by a team of pathologists. Benign breast tumors and inflammatory lesions were included in this study while malignant tumors were excluded.

RESULTS:

During study period, we received 200 cases of breast lesions in the

histopathology department. On histopathological examination of 200 cases of breast lesions, 180 (90%) were benign and 10% were malignant. Out of 180 benign lesions, 175 (97.2%) were found in females and 5 (2.8%) were found in males. Commonest benign breast lesion was fibroadenoma (86.1%), followed by fibrocystic disease (2.2%) and gynaecomastia (2.8%). Out of 180 cases, 150 (83.3%) cases presented with painless lump while rest with painful lump. Distribution pattern of benign breast disease is shown in Table 1. Age distribution pattern reveals most of the cases of benign breast lesions were found in 3rd decade followed by 2nd decade. Age distribution pattern of benign breast disease is shown in Table 2.

Table 1: Distribution of pattern of benign breast disease.

Benign Breast Disease	No. (%)
Benign tumors	
Fibroadenoma	155 (86.1%)
Gynaecomastia	05 (2.8%)
Benign phyllodes	01 (0.5%)
Benign spindle cell tumor	00 (0%)
Duct papilloma	00 (0%)
Tubular adenoma	00 (0%)
Benign proliferative lesions	
Fibrocystic disease	04 (2.2%)
Sclerosing adenosis	01 (0.5%)
Inflammatory lesions	
Granulomatous mastitis	03 (1.6%)
Tuberculous mastitis	03 (1.6%)
Abscess	02 (1.1%)
Chronic inflammation	02 (1.1%)
Fat necrosis	01 (0.5%)
Lymphocytic mastitis	01 (0.5%)
Lobular mastitis	01 (0.5%)
Periductal mastitis	00 (0%)

Table 2: Age distribution pattern of benign breast disease

Age group in years	No. of benign breast lesions
11-20	50 (27.8%)
21-30	90 (50%)
31-40	30 (16.7%)
41-50	07 (3.8%)
51-60	02 (1.1%)
61-70	00 (0%)
71-80	01 (0.55%)
81-90	00 (0%)

Out of 180 benign breast lesions, 5 male patients presented and diagnosed with gynaecomastia, constituting 2.8 % of all benign

lesions. Lesions were found in subareolar region of the breast, in which most of cases 3 (66.6%) were in 3rd decade and 3 lesions were seen in right side, 2 lesions in left breast and 1 was bilateral. Grossly, the masses were well circumscribed, oval, disk shaped, firm in consistency. Microscopically, the ducts showed a variable and prominent degree of epithelial hyperplasia and were surrounded by a prominent proliferating stroma.

DISCUSSION:

Women presenting with breast complaints, especially lumps is a common finding and a cause of significant anxiety in view of extensive public awareness. It therefore becomes imperative for a surgeon to distinguish benign from malignant conditions and its prevalence. A 200,000 breast disorders are identified annually and it is noted that most of the palpable lesions are benign. In the present study, out of 200 breast specimens received in histopathology department, 180 cases (90%) were benign breast lesions. Bagale et al a study of north Maharashtra noted 78.52% cases of benign breast lesions while 71.15% was noted by Pudale et al.^{4,5} A study of south Maharashtra and 70% benign breast lesions were noted by Kumar et al a study of east Maharashtra.⁶ Rasheed et al noted 77.7% of benign breast lesions in north India, and 70% in east India by Sarma et al.^{7,8}

Incidence of benign breast disease begins to rise in the 2nd decade and it peaks in the 4th or 5th decades as compared to the malignant lesions.¹ Kumar et al reported most of the cases in 11-30 years of age group while Bagale et al noted majority of cases in 21-40 years age group.^{4,6} We also noted most of the patients in 11-30 years of age group. Choudhary et al in benign breast disease noted lump in 39% cases, pain in 27.39% cases and nipple discharge in 2.49% cases with predominant involvement of left breast.⁹ Karki et al noted mastalgia as a significant problem accounting for 41% cases.¹⁰

Fibroadenoma (86.1%) was the most common lesion among benign breast lesions; similar finding was noted by Bagale et al, Mallikarjuna et al, Prajapati et al and Pudale et al.^{2,4,11} Majority of fibroadenoma patients belonged to 21-30 years (43.5%), followed by 11-20 years (37.4%) of age group in present study. Prajapati et al noted 80.64% of cases in 21-30 years, Sagar et al noted 46.87% in 15-20 years age group, Kumar et al noted 74.03% cases in 11-30 years while Mallikarjuna et al noted highest incidence in 11-20 years (47.22%) with youngest patient of 16 years old and the oldest patient was 45 years old.^{2,6,11,12}

We also advised follow up every 3 months for both the low and high risk categories, since some studies have the progression of the low risk category to carcinoma.¹ Hartmann et al stated, histologic features, the age at biopsy, and the degree of family history are the major determinants of the risk of breast cancer after the diagnosis of benign breast disease.¹³

CONCLUSION:

Breast self-examination and health education to females is very important in cases of benign breast disease. It is most commonly seen in 11-30 years of age group. Fibroadenoma is the most common benign breast disease. Most of the patients presented with painless lump in the breast in upper outer quadrant of breast. Histopathology plays an important role in the diagnosis of benign breast diseases. When correlated with clinical data, mammographic and ultrasonographic findings, the histopathological examination led to early diagnosis of a benign breast disease.

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Limitations:

As it is a single centre study with a relatively small study population, results cannot be generalized to the entire population.

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