



Original Research Article

Epidemiology of benign breast diseases in women

Bhavuk Kapoor¹, Mayank Kapoor², Parul Vaid^{3,*}, Bharat B Kapoor⁴, Sharda Kapoor⁵¹Dept. of Neurosurgery, Government Medical College and hospital, Jammu, Jammu and Kashmir, India²Dept. of Medicine, All India Institute of Medical Science, Rishikesh, Uttarakhand, India³Dept. of Obstetrics and Gynaecology, SMGS Hospital GMC, Jammu, Jammu & Kashmir, India⁴Dept. of Anaesthesia and ICU, Government Medical College, Jammu, Jammu and Kashmir, India⁵RBSK Jammu Division, Jammu, Jammu & Kashmir, India

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ABSTRACT

Background: Benign breast diseases are a common problem. This study was done to evaluate the different types of benign breast diseases in females based on their epidemiological characteristics, clinical, radiological and pathological findings.

Aims: To evaluate the different types of benign breast diseases in females based on their epidemiological characteristics, clinical, radiological and pathological findings.

Settings and Design: The epidemiological characteristics of patients of benign breast diseases were observed.

Methods: A study of 35 female patients of benign breast disease was done and their characteristic findings were recorded.

Statistical analysis: Statistical calculations were performed.

Results: The age group of 30-39 years had the highest incidence of the cases (34.28%). Lump in the breast was the most common (51.42%) presenting symptom. Most commonly involved quadrant was upper outer quadrant (60%). Fibroadenoma (51.42%) the most common lesion in our study and presented mostly as lump in the upper outer quadrant and occurred in the age group of 20-29 years mostly.

Conclusions: Benign breast diseases are fairly common in the younger age group. Fibroadenoma is the most common benign breast condition. Proper assessment and investigations are necessary for its diagnosis. The patient needs assurance regarding the benign nature of their disease by appropriate clinical, radiological and pathological diagnosis to allay their anxiety.

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1. Introduction

Benign breast diseases are a common problem in a day to day surgical practice. These disorders usually occur in the reproductive period of life and there is a dramatic fall in the incidence after menopause.¹

Benign pathology is depicted in almost 80% of breast biopsies.² Up to 30% of women will suffer from a benign breast disorder which requires treatment.

Benign breast diseases as such are not life threatening. Proper understanding of these disorders is important so as to give a clear explanation to the patient and to institute an appropriate treatment. Awareness about benign breast diseases amongst general population is very crucial.

There are many types of benign breast diseases like fibroadenoma, fibrocystic disease, galactocele, mastitis etc.

These diseases usually presents with symptoms of pain, lumpiness or a lump in breast.

Fibroadenoma commonly occurs in adolescents and is one of the most common benign breast disorders.

* Corresponding author.

E-mail address: kapoorbhavuk14@gmail.com (P. Vaid).

Fibrocystic disease occurs mostly in the age group of 20-50 years and presents bilaterally.³ There occurs cyclic bilateral breast pain, increased engorgement and density of the breasts.

In mastitis, the breast is indurated, red and painful. Nipple retraction may also occur. Fever may also be present.

Galactocele is commonly seen in lactating women and this typically present with a painless breast lump.

In duct ectasia there is dilatation of subareolar ducts. Usually presents with a palpable mass and nipple discharge.

We did the study to evaluate the different types of benign breast diseases in females based on their epidemiological characteristics, clinical, radiological and pathological findings.

2. Materials and Methods

Total thirty five female patients of benign breast diseases were included in this study. Their epidemiological characteristics, clinical, radiological and pathological findings were observed.

2.1. Inclusion criteria

Female patients clinically diagnosed as having benign breast diseases were included in this study after obtaining their written consent and on guidelines as per the institute's ethical committee.

2.2. Exclusion criteria

1. Cases diagnosed as having malignant breast disease were excluded.
2. Women who were previously treated for breast malignancy.

A detailed history and clinical examination of the patients was done – General physical, systemic and local examination of both breasts.

USG and/or Mammography of both breasts were done.

FNAC and/or Histopathology of benign breast lesion was done.

2.3. Statistical analysis

At the end of the study, statistical calculations were performed using the SPSS 16.0 software.

3. Results

In our study, age group of 30-39 years had most of the cases (34.28%) of benign breast diseases [Table 1].

Lump in breast was the most common (51.42%) presenting symptom [Table 2].

In our study, most of the patients were having duration of symptoms of 1-6 months (45.71%).

Table 1: Age distribution of benign breast diseases

Age groups (years)	No of cases	Percentage (%)
<20	2	5.71
20-29	7	20
30-39	12	34.28
40-49	10	28.57
>49	4	11.42

Table 2: Symptoms of benign breast disease

Symptom	No of cases	Percentage (%)
Lump	18	51.42
Pain	5	14.28
Lump + Pain	8	22.85
Nipple Discharge	4	11.42

The patients in our study commonly presented with lesion in the left breast (48.57%), followed by the lesion in the right breast (40%) and bilateral lesions (11.42%).

As shown in Figure 1, the upper outer quadrant was the most common quadrant involved (60%), followed by central quadrant (17.14%).

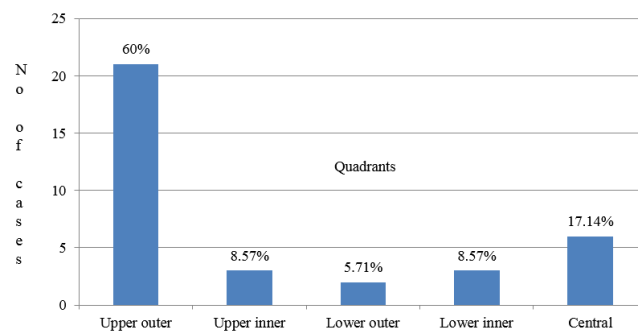


Fig. 1: Quadrant involved

As shown in Table 3, the highest number of cases of benign breast diseases were of fibroadenoma (51.42%), followed by fibrocystic disease (22.85%).

Table 3: Disease pattern of benign breast diseases

Diseases	No of cases	Percentage (%)
Fibroadenoma	18	51.42
Fibrocystic Disease	8	22.85
Galactocele	2	5.71
Phyllodes tumor	1	2.85
Duct ectasia	4	11.42
Breast abscess	2	5.71

Most of the cases of fibroadenoma were in the age group of 20-29 yrs and cases of fibrocystic disease mostly occurred in the age group of 40-49 yrs. Cases of duct ectasia commonly presented in the age group of 40-49 yrs. Breast abscess cases presented in the age group of 30-39 yrs

and >49 yrs. respectively. Galactocele and Phyllodes tumor occurred in the age group of 30-39 yrs [Figure 2].

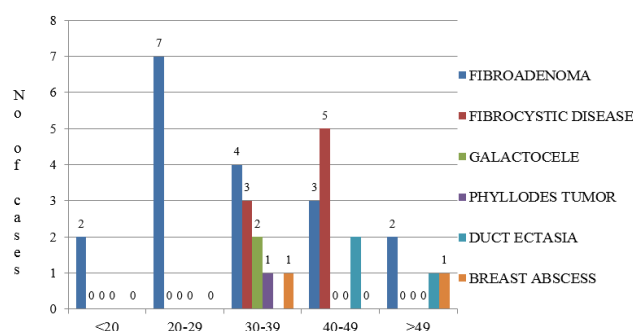


Fig. 2: Breast pathology in different age groups

Most common presentation in fibroadenoma cases was lump in the breast. In fibrocystic disease common presentation was pain in the breast. Galactocele presented as lump in the breast. In case of phyllodes tumor and breast abscess, the presentation was lump and pain in the breast. Nipple discharge was the presenting symptom in duct ectasia.

In our study, most cases of fibroadenoma presented with duration of symptoms of 1-6 months. In cases of fibrocystic disease duration of symptom was > 12 months in most of the cases.

Galactocele and Phyllodes tumor presented with symptoms of the duration of 7-12 months. Duct ectasia presented with symptoms of the duration of 1-6 months mostly. Breast abscess presented with the symptoms of the duration of < 1 month in all cases.

Most common quadrant of the breast involved in fibroadenoma was the upper outer quadrant. In case of fibrocystic disease also upper outer quadrant was commonly involved. Galactocele and Duct ectasia involved the central quadrant. Phyllodes tumor involved the upper inner quadrant and breast abscess involved the upper outer quadrant.

4. Discussion

In our study, the age group of 30-49 years had maximum incidence of benign breast diseases (62.85%). This was also noticed in the study conducted by Najeeb S jabbo, in which incidence of benign breast diseases was more in the age group of 30-49 years (56.92%).⁴ Other studies also concluded that the incidence of benign breast lesions begins to rise during 2nd decade of life and peaks in the 4th and 5th decades.⁵⁻⁷ Median age in our study was 35 years which was also observed in study conducted by Najeeb S jabbo (2010), in which the median age was 35.39 years.⁴

Lump in the breast was the most common presenting symptom in our study (51.42%). Lump and pain was the presenting symptom in 22.85% of cases in our study.

In other study also breast lump was the most common symptom having incidence of 49% followed by lump and pain having incidence of 28%.⁸ In another study also, the most common symptom was breast lump having incidence of 54.5% followed by lump and pain having incidence of 28.9%.⁴ Pain in the breast as the only presenting symptom was seen in 14.28% cases of our study. Nipple discharge was present in 11.42% of cases in our study. The study conducted by Najeeb S jabbo (2010) showed an incidence of nipple discharge as 8.8%.⁴

In our study, left breast and right breast were involved in 48.57% and 40% of the patients respectively and only 11.42% of the patients had bilateral benign breast diseases. In a study conducted by Onukak EE(1989), the incidence of benign breast diseases was more on left (48%) as compared to right (43.8%) and bilateral (8.2%).⁸

In 60% of patients in our study, the upper outer quadrant of the breast was involved. In other studies also the upper outer quadrant was the most commonly involved.^{9,10}

The most common benign breast lesion (51.42%) was fibroadenoma in our study. This was also observed in other studies, where the incidence of fibroadenoma was found to be 61.4% and 57% respectively.^{4,11} Pawan Tiwari in his study found that fibroadenoma was the predominant lesion in benign breast disease.¹² Fibrocystic disease was the second most common (22.85%) benign breast lesion seen in our study. This was in agreement with study conducted by Pawan tiwari (2013), in which fibrocystic disease was the second common (25.7%) benign breast lesion.¹² Najeeb S jabbo (2010) also observed fibrocystic disease as the second common benign breast lesion in his study.⁴

In our study, duct ectasia was present in 11.42% of cases. This was in accordance with the study conducted by Najeeb S jabbo (2010), in which duct ectasia was present in 8.78% of cases.⁴ In the studies conducted by Pawan tiwari (2013) and Mima MBS et al (2013), the incidence of duct ectasia was 4.4% and 6% respectively.^{12,13}

In our study, non-lactational breast abscess accounted for 5.71% of benign breast lesions. This was in accordance with the study by Siddiqui MS et al (2003), in which breast abscess accounted for 6.8% of cases.¹⁴ This was also observed in the study by Bagale P (2013), which had 6.5% of benign breast lesions as breast abscess.¹⁵ Incidence of galactocele was 5.71% in our study. In the study conducted by Pawan tiwari (2013), the incidence of galactocele was 1.3%.¹² In our study, Phyllodes tumor accounted for 2.85% of benign breast lesions.

In our study, most of the cases of fibroadenoma were seen in the 3rd decade of life (38.88%). Second highest number of cases of fibroadenoma was seen in the 4th decade of life (22.22%). In another study, most cases of fibroadenoma were in the 3rd decade of life (38.57%) followed by the 4th decade (30%).⁵ In another study, most cases of fibroadenoma (52.3%) were in the 3rd decade of

life.¹²

In our study, maximum cases of fibrocystic disease were in the age group of 40-49 years. This was in agreement with the study conducted by Chaudhary et al (2003), in which most of the cases of fibrocystic disease were in the 5th decade of life.¹⁶ In our study, the mean age of presentation for non-lactational breast abscess was 43.5 years. Study conducted by Akhator A (2007) showed that the mean age of presentation for breast abscess was 39 years.¹⁷ In our study, 50% of cases of duct ectasia were seen in the 5th decade of life. This was not in accordance with the study by Pawan tiwari (2013), in which most cases (50%) of duct ectasia were seen in the 3rd decade of life.¹² In our study, cases of both phyllodes tumor and galactocele were seen in the 4th decade of life.

In our study, fibroadenoma cases commonly presented as lump in the breast (88.88%). Common presentation of fibrocystic disease was pain in the breast (62.5%). Cases of galactocele presented as lump in the breast. In case of phyllodes tumor, presentation was lump and pain in the breast. In all cases of duct ectasia, nipple discharge was the presenting complaint. Cases of breast abscess presented with lump and pain in the breast.

In our study, most cases of fibroadenoma presented with duration of symptoms of 1-6 months. In cases of fibrocystic disease duration of symptom was > 12 months in most of the cases. Galactocele and Phyllodes tumor presented with symptoms of the duration of 7-12 months. Duct ectasia presented with symptoms of the duration of 1-6 months mostly. Breast abscess presented with the symptoms of the duration of < 1 month in all cases. Usually benign breast diseases have long duration of symptoms but in cases of breast abscess, presentation is earlier because of severe pain and fever.

In our study, fibroadenoma frequently involved the upper outer quadrant of the breast (72.22%). But in 22.22% of cases of fibroadenoma, lower quadrants both outer and inner were equally involved. In case of fibrocystic disease in our study, upper outer quadrant was involved in 75% of cases.

But in 25% of cases inner quadrants both upper and lower were equally involved. All cases of duct ectasia involved the central quadrant. Cases of breast abscess involved the upper outer quadrant. All cases of galactocele involved the central quadrant. Case of phyllodes tumor involved the upper inner quadrant. Overall upper outer quadrant was involved in most of the cases in our study. This was also seen in other studies.^{9,10}

5. Conclusions

Benign breast diseases are fairly common in the younger age group.

Patients may be unaware of their problems in the initial stages till symptomatology becomes fairly constant.

Fibroadenoma is the most common benign breast condition. It can be diagnosed appropriately by proper

clinical, radiological and pathological examination.

Fibrocystic disease is also fairly common benign breast disease. Proper assessment and investigations are necessary for its diagnosis.

Duct ectasia commonly presents as nipple discharge.

Breast abscess can be diagnosed easily by correlating the symptoms and requires immediate management.

The patient needs assurance regarding the benign nature of their disease by appropriate clinical, radiological and pathological diagnosis to allay their anxiety.

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7. Conflict of Interest

The authors declare they have no conflict of interest.

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Author biography**Bhavuk Kapoor**, Lecturer**Mayank Kapoor**, Post Graduate**Parul Vaid**, Senior Resident**Bharat B Kapoor**, Former Professor and Head**Sharda Kapoor**, Former Divisional Nodal Officer

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