# Clinical study of Benign breast diseases

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**ABSTRACT**

**Introduction:** Benign lesions of breast are numerous in population and it has different presentations, clinical features, age distribution etc. Its understanding plays an important role in its management and differentiating from malignant one. But these often get sidelined as there is no potential threat to life. However, these benign conditions carries a lot of stress to women as they think it can be or it is cancerous. So here we discuss in detail about benign breast disease (BBD).

**Aim of the study:** To study in detail the different modes of presentations of benign breast disease with respect to age, modes of occurrence, presentation, signs and symptoms and its treatment and complication. We also aim to correlate clinical findings with fine needle aspiration cytology and histopathology results.

**Materials and Methods:** Study was conducted at Prathima Institute of Medical sciences, Karimnagar. 100 female patients who attended the OPD and also the patients admitted with clinical diagnosis of BBD were interviewed as per proforma.

**Results:** The most common presenting complaint was lump in the breast. 92% were diagnosed with Aberrations in the normal develoment and involuion of the breast (ANDI) and 8% were diagnosed with inflammatory BBD. Fibroadenoma was seen in 40% of cases, fibrocystic disease in 34% of cases, fibroadenoma with fibrocystic disease in 12% cases and phylloides tumour in 6% cases. The FNAC report shows that the commonest ANDI is fibroadenoma. 30% cases of fibroadenoma showed post-op complications like wound infection, seroma and hematoma.

**Conclusion:** The specific and elicited diagnosis of BBD is very vital and essential in order to differentiate from malignant condition and its treatment is extremely crucial as patients not only gets relieved physically from the disease but also psychologically; who are worried about disease being cancerous.

**Keywords:** Benign Breast Disease, Fibroadenoma, ANDI, Fibrocystic Disease, Phylloides Tumor

## INTRODUCTION

Breasts are female secondary sexual organs. These are also present in males but these are rudimentary. It comprises of epithelium and stroma. These can cause development of benign and malignant lesions. Most of the patients who attend breast clinic have benign breast lump for which they fear that these might be cancerous.

Defining a high risk group and understanding the risk factors and etiology of breast malignancy is crucial as it can help not only in early treatment but also prevention.

Benign breast diseases (BBD) are present more in female population as compared to that of breast malignancy in them but these often get sidelined as there is no potential threat to life. However, these benign conditions carries a lot of stress to women as they think it can be or it is cancerous.

Diagnosis of benign breast disease can be done by using breast imaging and needle biopsy. It is rather important to differentiate it from malignancy so that specific and proper treatment can be done.

## MATERIALS AND METHODS

Study was conducted at Prathima Institute of Medical sciences, Karimnagar on 100 female patients who attended the OPD and also the patients admitted with clinical diagnosis of BBD. The cases were selected on random sampling basis.

Inclusion criteria were female patients above 12 years of age who attended the OPD and those admitted with clinical diagnosis of BBD and who were willing to undergo investigations and treatment and willing for follow up on monthly basis for a total period of 12 months following excision or conservative management. Exclusion criteria were male patients, cases of malignant breast lumps as per FNAC findings and patients aged 12 years and less.

Apart from performing FNAC routinely, we performed excision biopsy, mammography and ultrasound in selected cases.

**RESULTS**

The age distribution of patients with benign breast disease in the study group shows that most of the patients, 24% were between 30- 34 years of age. The study group does not have any patient above 50 years of age, only 4% of patients were above 45 years and 10% of patients were below 19 years of age. The mean age was found to be 30 years. [Table 1]

In the study group, 82 patients (82%) with BBD were married and 18(18%) of them were not married. The most common presenting complaint noted was lump in the breast, in 100 patients of which 50 (50%) patients presented with only lump, 28 (28%) presented with lump associated with pain , 2 (2%) with lump, pain and discharge and 10 (10%) with lump, pain and fever. The next common complaint was pain noted in 48 patients of which 10 (10%) presented with only pain as a complaint, others were associated with other symptoms. The next common complaint was fever noted in 10 (10%) patients, which was associated with lump and fever. Only 2 patients (2%) presented with discharge. [Figure 1]

Amongst 100 patients, 92 (92%) were diagnosed with ANDI and 8 patients (8%) were diagnosed with inflammatory type of benign breast disease.

Breast abscess(BA) and periductal mastitis (PDM) constituted 6% and 2% of the cases studied.

Fibroadenoma (FD) was seen in 40% of cases, fibrocystic disease (FCD) in 34% of cases, fibroadenoma with fibrocystic disease in 12% cases and phylloides tumour in 6% cases.

Of the inflammatory BBD, breast abscess was seen in 6 patients (6% of cases studied) and periductal mastitis was noted in 2 patients (2% of cases studied). All the 6 patients of breast abscess were between 20- 24 years of age. Mean age was found to be 22 years with a standard deviation of 2 years. All of them presented with history of lump, throbbing pain and discharge. The duration of symptoms was less than 7 days in 1 patient and more than 7 days in 2 patients. The past history, personal history, obstetric history and menstrual history were normal and nothing significant was found. The left breast was involved in all the 6 cases of breast abscess, the upper outer and inner quadrants were commonly involved, 2 cases showed involvement of all the three quadrants. The size of the swelling was more than 5x5 cm in all the 6 cases, with smooth surface, ill-defined borders, soft and tender consistency. Incision and drainage was performed and the pus was sent for culture and sensitivity, which was positive for staphylococcus aureus in all 6 cases. The patient of periductal mastitis was 19 years old, presented with history of lump, throbbing type of pain and discharge for 3 months. Central quadrant of the left breast was involved, the swelling was less than 5x5 cm, with smooth surface, ill-defined borders, firm in consistency and fixed. Both FNAC and HPE were suggestive of periductal mastitis. The operative procedure performed was fistulectomy with excision of half of areola.

The most common ANDI is fibroadenoma (60 cases) followed by fibrocystic disease (26 cases) and then by phylloides tumor (6 cases) according to clinical diagnosis. The FNAC report shows that the commonest ANDI is fibroadenoma (50 cases), followed by fibrocystic disease (24 cases), then by fibrocystic disease with epithelial hyperplasia (8 cases) and the least common is phylloides tumor (4 cases) .As per HPE report fibroadenoma (40 cases) is the commonest ANDI, followed by fibrocystic disease (12 cases) and fibrocystic disease with fibroadenoma (12 cases), and then by fibrocystic disease with epithelial hyperplasia (6 cases) and phylloides tumor (6 cases). HPE was not done in 16 cases of fibrocystic disease.

The age distribution of fibroadenoma shows that it is most frequent between 20 and 34 years of age (65%), with mean of 25.5 years and standard deviation of 6.7 years. Fibrocystic disease was most commonly noted between 25-44 years (100%) of which half (50% cases) were noted between 40- 44 years of age. Some cases presented with both fibroadenoma and fibrocystic disease, which was common in age group of 30-39 years (72%). Fibrocystic disease with epithelial hyperplasia was common between 30-44 years (100%). The phylloides tumor was frequent between 35- 50 years of age(100% cases).

The commonest complaint in fibroadenoma in the study group was lump in the breast, presented by all 40 patients (100%). In patients with both fibroadenoma and fibrocystic disease of the breast the common complaint was lump seen in 12 patients (100%), followed by pain with lump in 6 patients (50%). The most common complaint in fibrocystic disease of the breast was pain in 26 patients (93%) followed by lump in 18 patients (64%). All the 6 patients (100%) with fibrocystic disease associated with epithelial hyperplasia presented with lump and pain.

The commonest complaint in phylloides tumor was lump in the breast presented by all 6 patients (100%) and pain,2 patients (33.3%). Most of the patients with fibroadenoma, 26 (65%) presented within 6 months of onset of symptoms. All the patients, 40 (100%) presented within 1 year. 50% Patients with both fibroadenoma and fibrocystic disease presented within 6 months of onset of symptoms. Most of the patients with fibrocystic disease, 18 (65%) presented within 6 months of onset of symptoms. All patients, 6 (100%) with fibrocystic disease with epithelial hyperplasia presented within 1 year. All patients, 6 (100%) with phylloides tumour presented within 1 year of onset of symptoms.

Most common side involved in fibroadenoma was left 26(65%) followed by right 8(20%). In fibroadenoma with fibrocystic disease right side 10(83%) was commonly involved. In fibrocystic disease both sides were equally involved. Left side, 4(67%) was commonly involved in both fibrocystic disease with epithelial hyperplasia and phylloides tumour. Bilateral involvement was seen only in 6(15%) patients of fibroadenoma. Most common quadrant involved in fibroadenoma was left upper outer followed by right upper outer and left upper inner. Commonest quadrant involved in fibroadenoma with fibrocystic disease was right upper outer followed by right upper inner. The commonest quadrant involved in fibrocystic disease was right upper inner followed by left upper outer. Phylloides tumour commonly involved all quadrants 26 (65%) patients with fibroadenoma had lesions less than 5 cm and 14 (35%) patients had giant fibroadenomas.

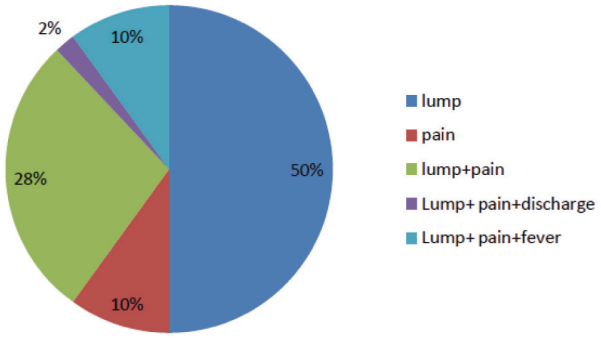
In patients with fibroadenoma most of the lesions were well defined with smooth surface, firm consistency and without fixity to breast. Most of the lesions in patients with fibrocystic disease were less than 5 cm in size, ill defined, had smooth surface, were firm in consistency with fixity to breast tissue. Phylloides tumours were more than 5 cm in size, lobulated, firm, well defined with fixity to breast.

Post-operative complications were seen in 12 patients (30% cases of fibroadenoma,16% of all cases of BBD who underwent operative procedures), which included, wound infection in 6 patients, seroma in 4 patients and hematoma in 2 patients. All the post-operative complications were seen in patients of fibroadenoma who were treated by excision under GA. These cases were later managed appropriately.

**Table 1 : Age distribution of patients with BBD**

| Age in years | No. of patients with BBD | % of patients with BBD |
|---|---|---|
| 12-19 | 10 | 10% |
| 20-24 | 22 | 22% |
| 25-29 | 6 | 6% |
| 30-34 | 24 | 24% |
| 35-39 | 22 | 22% |
| 40-44 | 12 | 12% |
| 45-50 | 4 | 4% |
| >50 | 0 | 0% |
| Total | 100 | 100% |

**Figure 1: Graph showing presenting complaints of the study group**




## DISCUSSION

The breast is vulnerable to both benign state as well as malignancy. Benign breast disease despite being more common than that of malignancy has not given much of notice in medical literature; though it encompasses variety of conditions.

A study by Akshara Gupta et al. also states that peak incidence of fibroadenoma is between 21-30 with mean of 23.69 which is similar to that in present study.[1] A study by Sangma et al also states incidence is between 21-30 years.[2]

The peak incidence of fibrocystic disease was noted between 31-40 years in the present study. In a study by Abhijith MG et al. Fibrocystic disease 55 cases (14.32%) was the second most common breast lesion with maximum age incidence in the age group of 31-40 years.[3] This is in accordance with the ANDI classification, where fibrocystic diseases are classified under disorders of involution and hence seen in the late reproductive age group.

The phyllodes tumor was frequent between 35-50 years of age (100% cases).

In the present study the most common presenting complaint noted was lump in the breast. The next common complaint was pain. A study by sangma et al [2] states most common presentation was lump followed lump plus pain and then pain similar to present study.

When a patient was having breast lump as a presenting complaint, they were more anxious and fearful as they thought that it could be cancerous or it can turn cancerous. However pain as a chief complaint (which is more often seen in fibrocystic disease) was relatively uncommon as women generally tolerate it or use analgesics to relieve it.

All the cases presenting within 1 month were patients with inflammatory disease with the exception of a case of periductal mastitis in the present study who presented at 3 months of onset of symptoms. The study by Akshara Gupta et

al also states that the most of patients presented within 2-6 months.[1] Most of the patients with benign breast disease presented within 6 months of onset of symptoms in the present study which correlates with the study mentioned above.

Most common side involved, with all the benign breast disorders taken into consideration was left, which is in accordance with the study mentioned above. In study by Soji F. Oluwole et al most of the lesions were between 1 cm and 10 cm.[4]

Fine needle aspiration cytology is very effective method to diagnose BBD and to differentiate it from malignant condition. It is more precise than clinical finding and helps in avoiding unnecessary surgery. However Histopathology examination is more accurate than FNAC. Recently trucut biopsy is being preferred over FNAC as more tissue is obtained for examination with diagnostic accuracy similar to HPE.

Breast self examination and health education to females is very important in cases of benign proliferative lesions. The presence of a discharge in association with palpable mass and positive results on mammogram or ultrasound requires evaluation of the mass.

All cases of fibroadenoma were treated by excision as most of the lesions were more than 3 cm in size. Women less than 25 years of age and those with smaller lesions were advised conservative management and excision if the lesions increased in size, but the patients were apprehensive of a lump present in the breast and opted for surgical excision.

16 cases of fibrocystic disease were managed conservatively, and larger lesions and painful lesions were excised. Fibrocystic disease with epithelial hyperplasia were excised and sent for histopathology to look for atypical hyperplasia which was not found in any of the cases. 4 cases of phylloides tumour were treated by subcutaneous mastectomy. 2 cases of phylloides tumour were misdiagnosed as fibroadenoma as per FNAC and was treated by excision. There were 6 cases of breast abscess following lactational mastitis and were treated by incision and drainage.

## CONCLUSION

The specific and elicited diagnosis of BBD is very vital and essential in order to differentiate from malignant condition and its treatment is extremely crucial as patients not only gets relieved physically from the disease but also psychologically; who are worried about disease being cancerous.

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