

# Histopathological study and management of benign breast disease at a tertiary care hospital

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## Abstract

Benign breast disease is primarily a phenomenon seen in reproductive age group. They are thought to be largely hormone induced. Benign breast disease is 4-5 times more common than breast cancer. The study includes patient attending surgical outpatient department and admitted to surgical wards with breast lump during the study period. Most of the patients underwent excision-85 patient (77.27%) followed by microdochotomy-4 (3.63%) and I & D-4 (3.63%). Simple mastectomy also done in 4 (3.63%) patients. Wide excision biopsy was done in 3 (2.72%) patient. Majority of the patients 90 patients (81.81%) did not have any post-operative complications, whereas 12 patients (10.90%) had discharge from wound and 5 patients (4.54%) had wound gape due to infection.

**Keywords:** Benign breast disease, wide excision biopsy, microdissectomy

## Introduction

Breast is a dynamic structure, which undergoes changes throughout women's reproductive life, and superimposed on this, cyclical changes throughout the menstrual cycle. The pathogenesis involves disturbance in the breast physiology extending from an extreme normality to well defined disease processes<sup>[1]</sup>.

Benign breast disease is the most common cause of breast problems up to 50% women will suffer from benign breast disorder requiring treatment at some time in their life<sup>[1]</sup>. It can affect both males and females. No age is immune.

The main problem from the women's point of view is fear that such a lump may be a cancer. The clinician must therefore provide a degree of diagnostic accuracy while at the same time ensure that an excessive biopsy rate is prevented.

Benign breast disease is primarily a phenomenon seen in reproductive age group. They are thought to be largely hormone induced. Benign breast disease is 4-5 times more common than breast cancer<sup>[2]</sup>.

The pathogenesis involves disturbance in the breast physiology extending from an extreme normality to well defined disease processes<sup>[3]</sup>. There is no satisfactory classification for benign breast disease and this all-inclusive term "fibrocystic disease" is often used on the basis of histological findings of fibrosis, cyst formation, epithelial activity in the biopsy specimen. Sandison<sup>[4]</sup> demonstrated presence of histological changes of fibrocystic disease through out the life of woman. Presence of wide variety of synonyms, inability of the clinicians to separate clinical from histological terms further prevented development of knowledge. Isolated but important advances occurred in 1950-1960. It was shown that the histological changes of fibrocystic disease were present in a majority of normal women with an increasing incidence throughout the life whereas clinical fibrocystic disease regressed at menopause.

A classification based on the concept of Abberation of normal development and involution (ANDI) is gaining acceptance<sup>[4]</sup>. It is based on the fact that most benign disease are relatively minor abberations of normal process of development, cyclical hormonal response and involution that interact throughout the human life.

The reports on the benign and completely curable lesions of the breast are scarce, because there have been overshadowed by the magnitude of the problems of cancer of the breast. Some of these pose diagnostic problems due to their clinical resemblance with carcinoma of the breast. Beside this, the spectrum of benign breast lesion shows considerable variations from one geographical region to another. The infective lesions are seldom seen in the west but in one of the Indian report, the infective disease was responsible for more than 13% of the benign breast diseases<sup>[5, 6]</sup>.

### Methodology

The study includes patient attending surgical out patient department and admitted to surgical wards with breast lump during the study period.

**Data collection:** By preparing a performa with relevant history, clinical examination and investigation.

**Exclusion criteria:** Patient who have not attained menarche, history of trauma, patient with malignant breast lump, patients who are not willing for surgery.

All the patients were studied and analysed in detail with regard to-

1. History
2. Clinical examination
3. FNAC
4. Operative findings
5. Histopathological findings
6. Post-operative course

### Results

**Table 1:** Side of Involvement of Breast

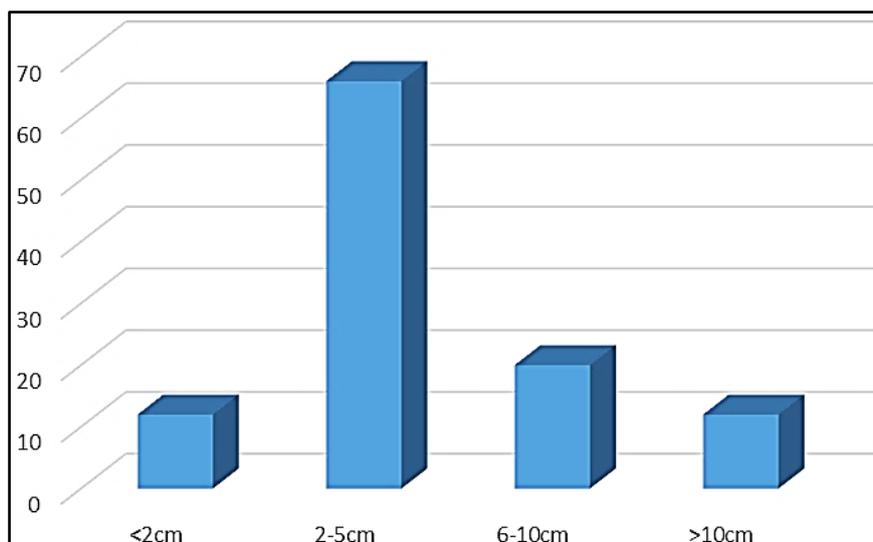
Side	Number of patients	Percentage
Left	61	55.45
Right	40	36.36%
Bilateral	9	8.18%

In the present study, it was found that the most common quadrant involved in benign breast disease is the upper outer quadrant-78(70.9%) followed by both lower outer and lower inner quadrant-10(9.09%) each. 1(0.9%) found to have the central side involved and 3(2.72%) found to have all quadrants involved.

**Table 2:** Quadrant involved in breast

Quadrant	Number of patients	Percentage
Upper outer	78	70.90%
Upper inner	8	7.27%
Lower outer	10	9.09%
Lower inner	10	9.09%
Central	1	0.9%
All quadrant	3	2.72%

Most of patients presented in OPD with complaints of breast lump 66 (60%) followed by patients presenting with lump and pain of 33(30%). Some patient show engorgement of breast 8 (7.2%). Few Patients also presented with lump, pain and discharge 3 (2.7%).

**Graph 1: Size of Tumor**

Maximum patients presented with FNAC reports showing Fibroadenoma in 59 (53.63) patients followed by Fibrocystic disease in 27(24.54%) patients. FNAC report also showed Phyllodes tumor-5 (4.54%) patients followed by Breast abscess-6 (5.44%), Galactocele-4 (3.63%), Duct papilloma-4 (3.63%), T.B. mastitis of 2 (1.81%) patients.

**Table 3: FNAC Report**

FNAC Report	Number of patients	Percentage
Fibroadenoma	59	53.63%
Fibrocystic disease	27	24.54%
Galactocele	4	3.63%
Duct Ectasia	3	2.72%
Duct papilloma	4	3.63%
Chronic Breast Abscess	6	5.44%
Phyllodes tumor	5	4.54%
T.B mastitis	2	1.81%

Most of the patients 102 patients (92.73%) underwent surgery for treatment of benign breast disease, whereas 8 patients (7.27%) were managed conservatively.

**Table 4: Treatment of patient**

Treatment	Number of patient	Percentage
Surgical	102	92.73
conservative	8	7.27%

Most of the patients underwent excision-85 patient (77.27%) followed by microdochectomy-4 (3.63%) and I & D-4 (3.63%). Simple mastectomy also done in 4 (3.63%) patients. Wide excision biopsy was done in 3 (2.72%) patient.

**Table 5: Surgical Treatment**

Treatment	Number of patient	Percentage
Excision Biopsy	85	77.27%
I and D	4	3.63%
Microdochectomy	4	3.63%
Quadrantectomy	2	1.81%
Simple mastectomy	4	3.63%

Wide excision	3	2.72%
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Majority of the patients 90 patients (81.81%) did not have any post-operative complications, whereas 12 patients (10.90%) had discharge from wound and 5 patients (4.54%) had wound gape due to infection.

**Table 6:** Post-operative Complications

Complication	Number of patients	Percentage
Wound gaping	5	4.90%
Wound discharge	12	11.76%
No complication	85	83.33%

Most of the patients histopathology report showed Fibroadenoma-57 (51.81%) followed by Fibrocystic disease in 24 (21.81%). Phyllodes tumor was seen in reports of 5 (4.54%), Antibioma in 4 (3.63%), malignancy in 2 (1.81%) and Duct ectasia and duct papilloma in 3 (2.72%) each.

**Table 7:** Histopathology

Histopathology	Number of patient	Percentage
Fibroadenoma	57	51.81%
Fibrocystic Disease	24	21.81%
Malignancy	2	1.81%
Phyllodes tumor	5	4.54%
Duct ectasia	3	2.72%
Duct papilloma	3	2.72%
Antibioma	4	3.63%

During first week, 15 patient (13.63%) had post-operative complications and no recurrence. At 1 month follow up, 5 patients (4.54%) had post-operative complications and no recurrences. At 6 months follow up, there was no post-op complications noted but 3 patients (2.72%) had recurrence of breast lump which was diagnosed to be fibroadenoma and had to be re-operated again.

**Table 8:** Follow up

Follow up	Responded to conservative management (n=8)	Post-operative Complicationn= 102	Recurrence N=110
1st week	0	15(14.70%)	0
1st month	3	5(4.90%)	0
3rd month	5	0	3(2.94%)
total	8	20	3

## Discussion

Onukak EE *et al.*<sup>[7]</sup> in his study of benign breast disorder in non-western population part 3 in 1989 studied 298 pts. In his study left side was involved in 48.3% of pts. Right side was involved in 43.8% pts. bilateral involvement was noted 5.8% pts.

Ajitha M Get *al.*<sup>[8]</sup> studied 210 pts of benign breast disease in 2012. In this study maximum (49%) pts were having left sided disease. Right side involvement was seen in 46.6% pts and bilateral involvement was seen in 5.4% pts.

Naveen N *et al.*<sup>[9]</sup> in his study "A CLINICAL STUDY OF BENIGN BREAST DISEASE IN RURAL POPULATION" in year 2013, studied 50 patients. In his study left side was involved in 42% pts. 34% pts had in right sided disease and remaining 24% pts had bilateral involvement.

In present study maximum number of patients had left sided involvement 55.45%. Right side involvement was seen in 36.36% and bilateral disease was seen in 8.18% pts.

Thus results found in our study are comparable with other studies.

Oluwole SF *et al.*<sup>[10]</sup> in his study analysis of Benign breast disease in blacks studied 202 pts with benign breast disease. In his study upper outer quadrant involvement was most common, seen in 67.9% pts. lower outer quadrant was involved in 10.5%, upper inner quadrant was involved in 8.1%, lower inner quadrant was involved in 8.8%, central quadrant was involved in 0.8%. 0.8% pts had disease involving all quadrants.

Ajitha MG *et al.*<sup>[8]</sup> studied 210 pts of benign breast disease in 2012. In this study maximum patients had upper outer quadrant involvement, seen in 43.8% pts. Lower inner quadrant was involved in 17.8%, upper inner quadrant was involved in 15.7%, lower outer quadrant was involved in 13.8% and central quadrant was involved in 4.2% pts.

In present study maximum number of patients had upper outer quadrant disease, seen in 70.9% pts. lower outer quadrant was involved in 9.09%, upper inner quadrant was involved in 7.27%, lower Inner quadrant was involved in 9.09%, central quadrant was involved in 0.9% pts. all quadrant disease was observed in 2.27% pts. Thus results found in present study are comparable with other studies.

Higher incidence seen in upper outer quadrant may be due to more amount of breast tissue in upper outer quadrant.

Naveen N<sup>[9]</sup> in his study "A CLINICAL STUDY OF BENIGN BREAST DISEASE IN RURAL POPULATION" in year 2013, studied 50 patients. In his study most lesion had size of 2-5cm observed in 58% pts. Lesions of size 6-10 cm were observed in 18% pts. 12% pts had lesions less than 2 cm while only 6% pts had lesion bigger than 10 cm.

In present study maximum number of patients had lesions of size 2-5cm observed in 60%. Lesions of 6-10cm were observed in 18%. Lesions smaller than 2 cm were seen in 10.9% pts. 10.9% pts had lesions bigger than 10 cm.

Thus results found in our study are comparable with above mentioned studies.

Likharev *et al.*<sup>[11]</sup> did a study of 302 pts named "Diagnostic criteria in Breast lesion" in 2013. Fibroadenoma was most commonly observed FNAC finding seen in 45.91% pts. Fibrocystic disease was seen 20.1% pts, Galactocele was seen in 2.8% pts. Phyllodes tumor was diagnosed in 1.36% pts.

Naveen N *et al.*<sup>[9]</sup> did a study of 50 pts named "A CLINICAL STUDY OF BENIGN

BREAST DISEASE IN RURAL POPULATION" in year 2013. maximum patients underwent excision of lesion, done in 64% pts. 24% pts were managed conservatively. 2% pts underwent simple mastectomy. incision and drainage was done in 2%. Wide local excision was done in 2%.

In present study excision of lesion was done in 72.27% pts. 7.27% pts were managed conservatively. Simple mastectomy was done in 3.63% pts. 3.63% pts underwent incision and drainage and microdochectomy each. Quadrantectomy was done in 1.81% pts. Higher percentage of surgical management is due to patient anxiety and more number of fibroadenoma patients for which surgical line of treatment is the only option.

Thus approximate distribution of various treatment options for benign breast disease in present study is comparable to other studies.

Adesunkanmi Ar, in his study of 225 patients stated that post-operative complications were infrequent after operative benign breast disease.

Present study shows that 84.54% of patients were asymptomatic whereas 15.46% of patients had post-operative complications like wound infection and wound healing disorders.

The higher rate of wound infection in our area is probably due to lack of personal hygiene followed by people in rural areas.

Abdul Rashid did a study of 72 cases "Three year study of Breast lesions in women aged 15-70 years in tertiary hospital", in 2014.

Fibroadenoma was most common histopathology diagnosis seen in 55.55% pts. Fibrocystic disease was seen in 11.11%, Duct ectasia was seen in 2.77% and duct papilloma was seen in 1.38% of histopathology reports.

Stanley Chibuzo Uwaezuoke<sup>[12]</sup> did a multicentre histopathological audit of benign breast lesions in 334 pts. In his audit fibroadenoma was seen in 45.6% of histopathological reports. Fibrocystic disease was seen in 26.3%, Phyllodes tumor was seen in 0.9% and duct papilloma was seen in 0.4% of histopathological report.

In present study, out of the 110 patients, maximum patients histopathology revealed Fibroadenoma in 51.81% followed by Fibrocystic disease in 21.81%, Phyllodes tumor in 4.54%, Antibiomain 3.63%, Duct ectasia in 2.72%, Duct papilloma in 2.72% and malignancy in 1.81%.

Thus results of Histopathology reporting in benign breast disease found in our study are comparable with other national and international studies.

Adesunkanmi AR, in his study of 225 patients demonstrated that at 3 months follow up there were infrequent post-operative complications and recurrence was noted in ipsilateral/contralateral breast in 4.4% of patients.

Present study shows that at 3 months follow up there were no post-operative complications noted and recurrence was noted in 2.72% of patients. This is comparable with below mentioned studies.

### Conclusion

- Fibroadenoma is the commonest lesion (53.6%). Fibrocystic disease is the next commonest with 24.54% of cases.
- Comparison of clinical diagnosis and FNAC to HPE was done of fibroadenoma and fibrocystic disease was done. Clinical diagnosis and FNAC of fibroadenoma was found to have sensitivity of 100% each and for fibrocystic disease clinical diagnosis and FNAC has a sensitivity of 91.7% each when compared to histopathological examination.

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