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## A study of management of Benign Breast lesions: A prospective study

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### Abstract

**Background and objectives:** Breast lumps diseases are one of the most common diseases in India which include congenital, traumatic, inflammatory, hormonal mastopathy, benign and malignant neoplastic conditions. Around 200,000 cases of breast diseases are diagnosed annually. The purpose of present study was to assess the role of ultrasound and Fnc in the diagnosis of breast lesions and the various modes of management.

**Method:** Fifty cases of benign breast diseases were studied during the period from June 2017 to May 2018.

**Result:** In the present study USG has an accuracy of 77.78% for detection of Fibroadenoma and 66.67% for Cystosarcoma Phyllodes. FNAC forms the major investigatory modality with fair accuracy of 91.67% present to diagnose fibroadenoma and 66.67% for Cystosarcoma phyllodes. Intracanalicular type of fibroadenoma was the most common type of fibroadenoma on Histopathological report (83.33%). Surgical excision is the effective treatment for most of the benign breast disease nearly upto 90% cases. Wide excision and simple mastectomy needed rarely.

**Conclusion:** FNAC is a most accurate, safe, cost effective and easy method to confirm the diagnosis of most benign breast disease with good sensitivity. Surgical Excision is the main stay of treatment for most benign breast diseases

**Keywords:** Benign breast disease, ANDI, Fibroadenoma, Cystosarcoma phyllodes

### Introduction

Mammary glands, or breasts, are a distinguishing feature of mammals <sup>[1]</sup>. It is unique in that its development and growth are under the control of numerous hormones and various physiological states such as pregnancy and lactation.

Until recently benign disorders of the breast were regarded, as relatively unimportant: far more attention was focused on breast cancer. This has resulted in many patients with benign breast disease receiving rather scant attention from clinicians, and there has been relatively little academic investigation into this complex subject. Benign breast disease has also suffered from the major disadvantage of a hopelessly confusing terminology, inadequate classification and poor correlation between clinical, radiological and pathological features <sup>[2]</sup>.

During the past decade there has been increasing interest in benign breast disease for a number of reasons. As patients demand investigation and treatment for symptoms of benign breast disease. This has, in turn, increased the number of women referred to specialist breast disease units these have participated in scientific studies on the classification and treatment of their condition <sup>[2]</sup>.

The term benign breast disorder (BBD) can be defined as any nonmalignant breast condition and encompasses a wide range of clinical and pathologic disorders. Although BBD is not life threatening, clinicians require an in-depth understanding of its significance so that clear explanations can be given to affected patients, appropriate treatment can be instituted, and unnecessary long-term follow-up can be avoided <sup>[3]</sup>.

The aberrations of normal development and involution (ANDI) classification of BBD provides an overall framework for benign conditions of the breast that encompasses both pathogenesis and the degree of abnormality <sup>[4]</sup>. It is a bidirectional framework based on the fact that most BBD arise from normal physiologic processes.

Most BBD can be regarded as minor aberrations of normality and hence do not demand specific treatment.

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This being the case, any active management of these conditions is based on considerations such as an accurate diagnosis, the patients concern, and interference with quality of life [3].

### Methodology

This clinicopathological study includes cases of benign breast disease is a prospective study conducted in government hospital from June 2017 to June 2018.

This survey was mainly meant for studying the age distribution, to evaluate the different types of benign diseases of the breast and their mode of clinical presentation and pathology and to evaluate the various modes of management for different types of Benign Breast Diseases.

**Inclusion Criteria:** Patient who get admitted, who are clinical diagnosed and confirmed by histopathology examination representing various types of benign disease of the breast are included in the study.

**Exclusion Criteria:** Patients diagnosed clinically as benign breast disease but in whom histopathological examination reports proved to be otherwise are excluded from the study.

Totally 47 cases came for follow up to the outpatient, but 3 cases did not come inspite of appeal made to them, mainly because of financial difficulties, partly because of their carelessness and probably because of the long distance from which the patients came to the hospital for their original treatment.

**Method of Clinical Survey:** This is a study comprising of 50 cases of benign breast disease which includes 36 cases of fibroadenoma, 6 cases of Cystosarcoma phyllodes, 2 cases of

lipoma, 2 cases of galactoceles, 2 cases of tubular adenoma and 2 cases of ductal ectasia. All collected within the span of 2 years from inpatient wards of Chigateri General Hospital and Bapuji Hospital, Davangere, AH patients were admitted to the hospital a few days earlier to surgery.

After admission to the hospital, a detailed history was taken regarding the presenting complaints particularly the duration, mode of onset of lump and pain in breast, its progress, nipple discharge, history of undergoing operation previously for a similar lump, Family history of occurrence of benign breast disease, menstrual and obstetric history, history of taking contraceptive pills and whether the patient was pregnant or lactating. All details were entered in the charts specially prepared (proforma).

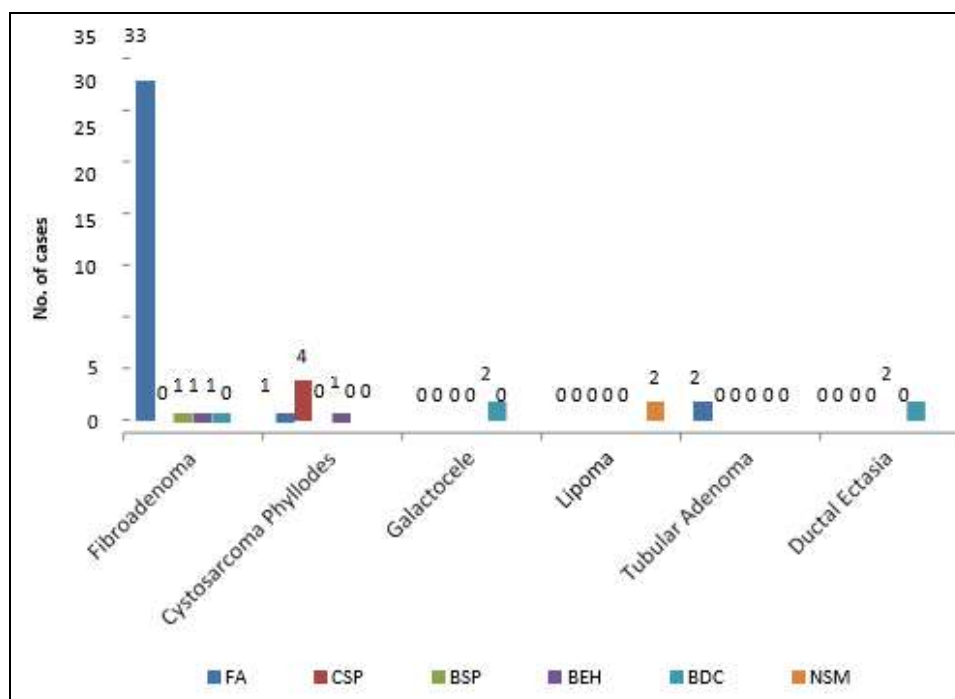
After taking the history, a general examination of the patient was done and general condition noted as regards to anaemia and hypoproteinaemia. A detailed local examination of presenting lesion was then carried out and a diagnosis arrived at.

After routine haematological and urine examination, patient were subjected to specific investigation like ultrasonography of the breast. FNAC of the lump and Mammography. All patient underwent operative treatment either in the form of excision biopsy or enucleation or wide excision or simple mastectomy. The excised specimen was sent for histopathological examination for confirmation of clinical diagnosis. All the patients were followed up for varying periods for evidence of recurrence.

### Results

**Table 1:** Cyto-Histological Correlation in B.B.D.

Histological Diagnosis	F.A (%)	C.S.P. (%)	B.S.P. (%)	B.E.H (%)	B.D.C (%)	N.S.M (%)
Fibroadenoma (36 cases)	33 (91.67%)	-	1 (2.78%)	1 (2.78%)	1 (2.78%)	-
Cystosarcoma Phyllodes (6 cases)	1 (16.67%)	4 (66.67%)	-	1 (16.67%)	-	-
Galactocoele (2 cases)	-	-	-	-	2	-
Lipoma (2cases)	-	-	-	-	-	2 (100%)
Tubular Adenoma (2 cases)	2 (100%)	-	-	-	-	-
Ductal Ectasia (2 cases)	-	-	-	-	2	-



**Graph 1:** Cyto-histological correlation in B.B.D

**Ultrasonography of Breast Lump:** All the cases in my study were subjected to USG of Breasts. After verifying with histopathological diagnosis, we found that USG of the breast was able to detect 28 out of 36 cases of Fibroadenoma correctly ie in 77.78% of cases, 4 out of 6 cases of Cystosarcoma phyllodes were detected by USG correctly ie in 66.67% of cases. USG was accurate in the diagnosis of a 2 cases of Lipoma and tubular adenoma. USG was not able to diagnosed Galactoceles and Ductal Ectasia. It was helpful in differentiating solid from Cystic lumps of the breast.

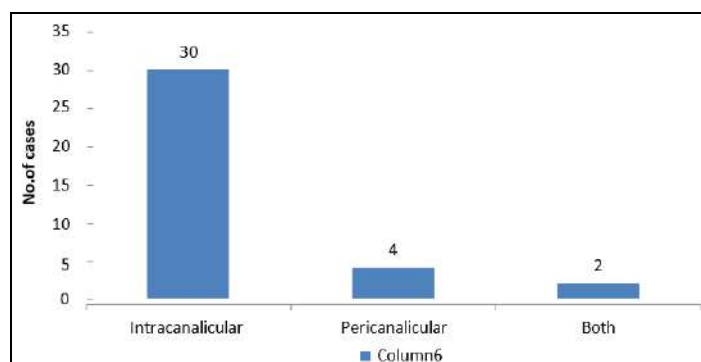
FA- Fibroadenoma, CSP-Cystosarcoma Phyllodes, BSP- Benign Subareolar Papillomatosis, BEH- Benign Epithelial Hyperplasia, BDC- Benign Ductal Cells, NSM- Non Specific Mastitis.

In my study, of the 36 cases of fibroadenoma documented histopathologically, FNAC cases consistent in 91.67% of cases, 1 case (2.78%) each was documented as benign subareolar papillomatosis, benign epithelial hyperplasia and benign ductal cells. Of the 6 cases of cystosarcoma phyllodes documented histopathologically, FNAC was consistent in 66.67% of cases, 1 case (16.67%) was documented as fibroadenoma on FNAC and 1 case (16.67%) as benign epithelial hyperplasia. No single case was reported as Malignant on FNAC. Two cases of Tubular adenoma were reported as fibroadenoma on FNAC. Two cases of Lipoma were reported as NSM on FNAC, Two cases of each Galactocoele and ductal ectasia were reported as BDE on FNAC.

**Table 2:** Histopathological types of fibroadenoma

Type	No. of cases	%
Intracanalicular	30	83.33%
Pericanalicular	4	11.11%
Both	2	5.56%

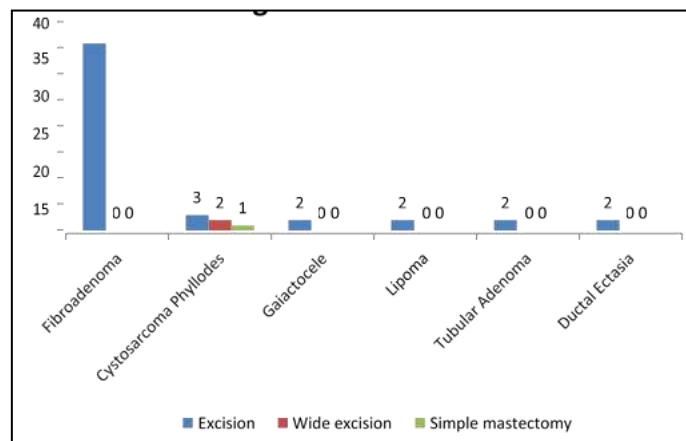
In my study, intracanalicular type was the commonest variety of fibroadenoma seen in 30 cases out of 36 cases (83.33%) in histopathology report.



**Graph 2:** Histopathological types of fibroadenoma

**Table 3:** Various types of treatment of benign breast diseases

Diseases	Excision	Wide excision	Simple Mastectomy
Fibroadenoma	36	-	-
Cystosarcoma Phyllodes	3	2	1
Galactocoele	2	-	-
Lipoma	2	-	-
Tubular Adenoma	2	-	-
Ductal Ectasia	2	-	-
<b>Total</b>	<b>47</b>	<b>2</b>	<b>1</b>



**Graph 3:** Various types of treatment of benign breast diseases

## Discussion

Benign Breast Diseases a common disease affecting women in our country. According to the Statistics obtained from government hospital, the majority of diseases affecting the female breast were benign disease.

**Ultra-Sonography:** All the cases in my study were subjected to Ultrasonography (USG) of the breasts. After verifying with histopathological diagnosis, it was found that Ultrasonography of the breasts was able to detect 28 out of 36 cases of fibroadenoma correctly ie in 77.78% of cases, 4 out of 6 cases of Cystosarcoma phyllodes were detected by Ultrasonography correctly ie 66.67% of cases. Ultrasonography was very useful in detecting solid from cystic lesions of the breast.

**FNAC:** In my study FNAC correctly diagnosed 91.67% of cases of fibroadenoma. Linsk *et al* [80], reported an accuracy of 60.4% in 1972. Hand Uma *et al* [81] reported in their series of 360 fine needle aspirations as efficiency of 98.3% in diagnosis. Of the 6 cases of Cystosarcoma phyllodes FNAC correctly diagnosed 4 cases (66.67%) as benign phyllodes tumour. 1 case was misdiagnosed as fibroadenoma and 1 case was reported as benign epithelial hyperplasia.

In my study, all the FNAC reports were indicative of the benign nature of lesions. As the number of Cases studied in my series is small, further study is required with a larger number of cases to find out the diagnostic accuracy of FNAC in differentiating benign from malignant tumours of the breast.

In my study, the clinical diagnosis correlated well with the histopathological diagnosis.

**Treatment:** In my study, all the 36 cases of fibroadenoma underwent surgery in the form of enucleation or excision biopsy. Excision was not difficult in any of the cases. 2 cases of bilateral fibroadenomas underwent bilateral excision. The incisions used were either a subareolar or semicircular incision and radial incision following the natural lines in the skin.

Of the 6 cases of Cystosarcoma phyllodes, 3 cases underwent excision, 2 cases underwent wide excision and 1 case underwent simple mastectomy.

Two cases of each Galactocoele, Lipoma, Tubular adenoma and Ductal Ectasia underwent excision. A drain was kept for all cases which was removed after 48 hours. Postoperatively patients were put on antibiotics and analgesics. Suture were removed after 7 days and none of the cases had wound infection or gaping.

**Follow Up:** Totally 47 patients came for follow up to the outpatient. Recurrence of the lesions was not noticed in any of the patients who came for follow up for periods upto 6 months. Haagensen has reported recurrence of benign breast tumours to be very rare in a period of 3 years. It is mainly because of a smaller lesion being unnoticed during the first operation. Foster ME<sup>[5]</sup> *et al*, reported in their series that recurrence of fibroadenomas was related to inadequate primary excision or the development of a new lesion and the mean time for development of new lesions was over 4 years. Another series reports a recurrence rate for these lesions within the range of 15%. Moffat and Colleagues<sup>[17]</sup> have reported incomplete excision of phyllodes tumours as a major determinant for local recurrence.

### Conclusion

FNAC is a most accurate, safe, cost effective and easy method to confirm the diagnosis of most benign breast disease with good sensitivity.

Surgical Excision is the main stay of treatment for most benign breast diseases. Wide excision and simple mastectomy may needed in some cases of Cystosarcoma phyllodes.

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