

**BENIGN BREAST DISEASE: OUR INSTITUTIONAL EXPERIENCE**Harish Kumar C<sup>1</sup>, S. I. S. Khadri<sup>2</sup>, T. Kemparaj<sup>3</sup>, Vivek S. R<sup>4</sup>**HOW TO CITE THIS ARTICLE:**

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**ABSTRACT: BACKGROUND AND OBJECTIVES:** In this modern era of change in dietary habits, life style and increased awareness about the self-breast examination, the rate of detection of breast lump is on increasing trend. Due to its enormous anatomical and physiological changes during different phases of life, breast diseases are not uncommon. The benign conditions however are also associated with morbidity and are of great concern to the patient. This study was carried out to compare the age distribution and proportion of various benign breast tumors, taking into account the various factors associated with them. A correlation of clinical and histopathological diagnosis was drawn and thus the specificity of clinical diagnosis. **METHODS:** Prospective review of 50 patients from General Surgery department, who are found to have benign breast tumors on clinico-pathological examination, Bowring and Lady Curzon Hospitals, attached to Bangalore Medical College & Research Institute, Bangalore selected during the period from October 2011 to April 2014 on random basis. Post-operative follow up done to note the complications both in hospital and after discharge. **RESULTS:** Patients predominantly presented with lump in breast were fibroadenoma and fibrocystic disease. Ductal papilloma, phyllodes tumor and lipoma were also encountered. All patients underwent FNAC. Treatment was mostly surgical in the form of excision, simple mastectomy, microdochotomy and wide local excision. All the specimens were subjected to histopathological examination. Using clinical diagnosis, FNAC and histopathology increased the accuracy of diagnosis. Cases followed up and no recurrence was found. **CONCLUSIONS:** Commonest benign breast tumor found was Fibroadenoma (78%). Majority of the patients were in the active reproductive age group. Fibroadenoma was more common in 2<sup>nd</sup> decade of life, whereas fibrocystic disease found in 3<sup>rd</sup> decade. Majority of benign breast lesions presented with painless lump. FNAC was a diagnostically accurate procedure with respect to benign breast diseases, confirmed by histology. Triple assessment is a gold standard approach to breast disease management.

**KEYWORDS:** Benign Breast Disease, Fibroadenoma, Fibrocystic Disease, Phyllodes tumor.

**INTRODUCTION:** Breast health means more than breast cancer. The vast majority of the lesions that occur in the breast are benign. It has been noted that noncancerous pathology of the breast has always been neglected, compared to breast cancer in spite of the fact that benign conditions account for 90% of the clinical presentations related to the breast.<sup>1,2</sup> About 5-55% of all women suffer from breast disorders in their life time. Approximately 40% of all patients attending a breast clinic have a benign breast lump.<sup>3</sup>

Benign disorders of the breast is usually seen in the reproductive period of life, is thought to be largely hormone induced and there is a dramatic fall in the incidence, after menopause due to cessation of clinical ovarian stimulation. Benign breast disease is 4-5 times more common than breast cancer.<sup>4</sup> The concept of ANDI-Aberrations of Normal Development and Involution, proposed by Huges is now universally accepted<sup>5</sup>. Benign proliferations of the breast are often considered as aberrations

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of normal development and involution. The cyclical changes due to variations in estrogens and progesterone result in increased mitosis around days 22-24 of the menstrual cycle but apoptosis restores the balance across the cycle.<sup>6</sup>

### AIMS AND OBJECTIVES:

- To know the overall spectrum in relation to age, sex and clinical presentation in institutional setup.
- To correlate the Aberration of the normal development and involution of breast (ANDI), Duct ectasia/periductal mastitis, Pregnancy related breast disease. Congenital disorder of breast.
- The role of FNAC in diagnosing and differentiating the benign and malignant lesion.

**METHODS:** This is a prospective study. This study of benign breast tumors, its clinico-pathological aspects is based on 50 cases admitted in BOWRING & LADY CURZON HOSPITALS, BANGALORE MEDICAL COLLEGE & RESEARCH INSTITUTE, BANGALORE from October 2011 to APRIL 2014 on random basis.

All patients who were clinically diagnosed as benign breast tumors and among them who were willing to undergo investigations and treatment were included. All cases of breast lump which clinically appear as malignant were excluded from the study.

A detailed history was taken of all eligible patients regarding the presenting complaints, particularly the duration, mode of onset of the lump in the breast, its progress, pain in the lesion, nipple discharge, history of trauma and fever.

Past history of lump in the breast, undergoing any surgeries for lump in the breast and history of mastalgia, personal history, menstrual and obstetrics history was taken. Family history of breast carcinoma was enquired.

A careful clinical examination of the patient was done and the diagnosis was arrived at. Patient underwent routine hematological and urine examination. Other investigations like blood urea, serum creatinine, blood sugar, electrocardiography and chest X-ray were carried out when deemed necessary. Clinical diagnosis was confirmed by fine needle aspiration cytology from the lump. Treatment was planned. Most preferred surgical treatment. The excised specimen was sent for histopathological examination for confirmation of cytological and clinical diagnosis.

Post-operatively, all patients received a course of antibiotic for five days and sutures were removed on the tenth day. Patients were followed up periodically but some patients failed to come for follow up.

**RESULTS:** In the two year period from October 2011 to April 2014, 50 cases of benign breast tumors were studied. The incidence of benign breast tumors encountered during the period of the present study is given in the following sections.

- 1. Type of Lesion (n=50):** In the present study, fibroadenoma predominated with 39 cases (78%). Next common benign tumour found were fibrocystic disease 7 cases (14%), Ductal Papilloma 2 cases (4%). Single cases of phyllodes tumour (2%), lipoma (2%) were found.
- 2. Age spectrum:** The incidence of fibroadenoma was maximum in 21 to 30yrs of age group, followed by in third decade. Fibrocystic disease was maximum in the age group of 31-40yrs. Out of 2 cases of Ductal papilloma, one found in second decade and other in fifth decade. Only one case of Phylloides tumour found in fourth decade. A case of lipoma was seen in a 50yr old male.

In the present study, the youngest affected is a 12yr old girl and the oldest female is 55yrs old.

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3. **Sex spectrum:** In the present study majority of patients were females and only two were males. One male diagnosed to have fibroadenoma and another lipoma. Among the females, most presented with fibroadenoma, followed by fibrocystic disease.
4. **Presenting Symptoms:** The most common presentation was lump in 35 cases, painful lump in 14 cases and recurrent lump in one case. The pattern of pain was non-cyclical in majority of the cases who presented with painful lump. Most of the patients (29) presented in 3-6 months of time after symptoms started, 9 cases within 2 months and 3 cases with symptoms duration more than a year.
5. **Co-relation of Clinical diagnosis Vs FNAC:** All cases were subjected to cytological examination (FNAC), out of 45 clinically diagnosed fibroadenomas, 41 came out as fibroadenoma (91.1%), 3 as fibrocystic disease (6.7%), 1 case as Ductal Papilloma (2.2%).

Two cases of clinically diagnosed fibrocystic disease showed only one as fibrocystic disease other as fibroadenoma on cytological examination.

One case each clinically diagnosed as phyllodes tumor and doubtful carcinoma turned out as fibroadenoma.

One case of clinically diagnosed lipoma came out as lipoma on FNAC.

6. **Co-relation of FNAC Vs HPE:** In 44 cytologically proven cases of fibroadenoma, 38 (86.4%) were consistent with the diagnosis on histological examination, 5 (11.4%) cases as fibrocystic disease and 1 as ductal papilloma.

In 4 cases of fibrocystic disease, 2 (50%) reported as fibrocystic disease, 1 as fibroadenoma and another turned out as phyllodes tumor- low grade on histology. One case each was consistent with cytological report as lipoma and ductal papilloma.

7. **Treatment:** The present trend of conservative management of most benign breast disorders has reduced number of surgical procedures for these conditions. However in view of the anxiety regarding symptoms, distance to be traveled and poor socioeconomic conditions leading to difficulty in follow up, quite a few patients opt for an early surgical method of resolution of symptoms.

Fibroadenomas were treated by simple excision except for a single case in male where he underwent simple mastectomy, and one case wide local excision was done where it was clinically diagnosed as phyllodes tumor.

All other cases were treated by excision including phyllodes tumor.

### REVIEW OF LITERATURE:

- Relative Incidence of Benign Breast tumors in various reported series (percentage).

Authors & Year	Ethnic Group	Fibro adenoma	Phyllodes Tumor	Fibro cystic Disease	Ductal papilloma	Lipoma
Khanzada et al., (2009) <sup>7</sup>	Asian n=275	27.3	-	20.7	4.7	-
HS Shukla et al (1989) <sup>8</sup>	Indian n=617	86.5	5.6	-	2.7	-
Khanna et al (1998) <sup>9</sup>	Indian n=971	40.8	13.8	13.8	-	-
Present Series	Indian n=50	78	2	14	4	2

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- Age in relation to benign tumors of the breast.

In our study the youngest patient of Fibroadenoma was 12 years and oldest patient was 55 yrs. Age incidence encountered in the present study was almost similar to the study conducted by Khanzada et al., (2009)<sup>7</sup> and Khanna et al.,<sup>9</sup> with respect to fibroadenoma and fibro cystic disease. In present study phyllodes tumor was found in 41-50 year age group. Lipoma found in 50 year old male. Ductal papilloma found one in second decade and another in fifth decade. Majority of cases in the present study were in the reproductive age group.

- Co-relation of Clinical diagnosis Vs FNAC VS HPE.

Hand U et al, <sup>10</sup> Cytology(FNAC)		Histology (HPE)		Agreement (%)
Clinical Diagnosis	No	Diagnosis	No.	Agreement (%)
Fibroadenoma	29	Fibroadenoma	26	89.6
		Fibrocystic disease	03	
Fibrocystic disease	05	Fibrocystic disease	03	60
		Fibroadenoma	02	
Breast abscess	03	Abscess	02	66
		Infiltrating ductal carcinoma	01	

	FNAC	HPE					
		FA	FCD	PT	DP	Lipoma	Total
Fibro adenoma	44	38	5	0	1	0	44
		86.4%	11.4%		2.2%		100%
Fibrocystic disease	4	1	2	1	0	0	4
		25%	50%	25%			100%
Lipoma	1	0	0	0	0	1	1
						100%	100%
Ductal Papilloma	1	0	0	0	1	0	1
					100%		100%
<b>Total</b>	<b>50</b>	<b>39</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>50</b>

Findings noted in the study conducted between Hand U et.al.<sup>10</sup> and findings of the present study are almost similar with respect to fibro adenoma and fibro cystic disease. In the present study cytological diagnosis as fibroadenoma was 44, among which 38 (86.4%) were proved to be fibroadenoma on biopsy, which is similar to the study conducted by Hand U et.al,<sup>10</sup> where cytological diagnosis as fibroadenoma was 29 among which 26 (89.6%) were proved to be fibroadenoma on biopsy.

In the present study cytologically diagnosed four cases of fibrocystic disease two (50%) were proved as fibrocystic and one as fibroadenoma and other as phyllodes tumor on biopsy which is almost similar to Hand U et.al,<sup>10</sup> study (60%).

**DISCUSSION:** In the present study, 50 cases of benign breast tumors were studied with respect to their incidence, clinical presentation, pathology, cyto-histological correlation and management.

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Fibroadenoma was the predominant benign breast tumor occurring in 78% of cases. The next common tumors were fibrocystic disease 14%, ductal papilloma 4%, phyllodes tumor 2% and a case of lipoma 2%.

Majority of the fibroadenoma cases were found in the age group of 21-30 years. Fibrocystic disease was maximum in 31-40 years of age group and phyllodes tumor found in 5<sup>th</sup> decade. Fibroadenoma occur at a slightly earlier age group than fibrocystic disease, which occur at the peak of repeated cyclical changes of reproductive life. Youngest patient in our study was 12 years and oldest was 55 years.

Commonest mode of presentation of most of our benign breast tumors was painless lump in the breast. Phyllodes tumor, ductal papilloma and lipoma also presented as painless lump. In majority of cases (80%) duration of lump was between 3-6 months.

Our study indicates that FNAC is a diagnostically accurate procedure. However, when FNAC was inconclusive, biopsy is the ultimate choice for breast tumors. Sensitivity of cytology for fibroadenoma was 91.1% and specificity was 86.4%.

An excision is an adequate and effective treatment for most of the benign breast tumors. Most cases treated by excision, one case each by wide local excision, simple mastectomy and microdochotomy. No recurrence was found in followed up cases.

**CONCLUSION:** 2<sup>nd</sup> to 4<sup>th</sup> decade of life is the most common age of occurrence of benign breast tumors. Various Benign breast tumors have a specific age of occurrence, according to the cyclical changes of menstruation, pregnancy, lactation and involution. The most common form of benign breast tumor is a fibroadenoma, followed by fibrocystic disease, ductal papilloma, phyllodes tumor and lipoma. Lump in the breast is the most common presentation of benign breast tumors. Specificity of clinical examination and FNAC in diagnosing various benign lesions of the breast is fairly accurate. Sensitivity of cytology for fibroadenoma was 91.1% and specificity was 86.4%. Hence the role of triple assessment – history & clinical examination, imaging and sampling of lesion for cytological / histological assessment is very appropriate, in managing a breast lump.

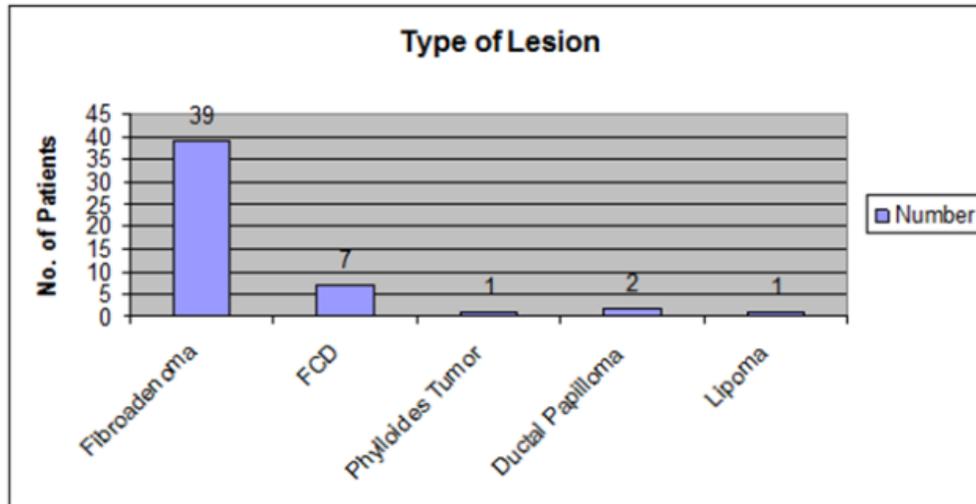
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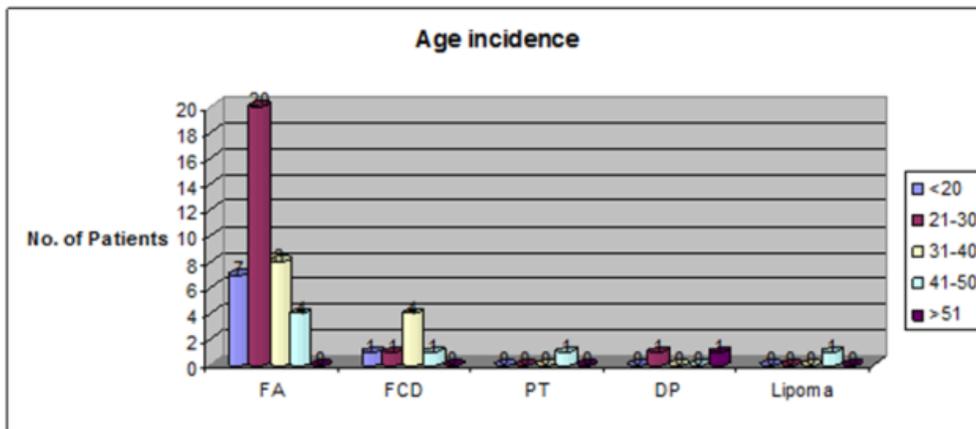
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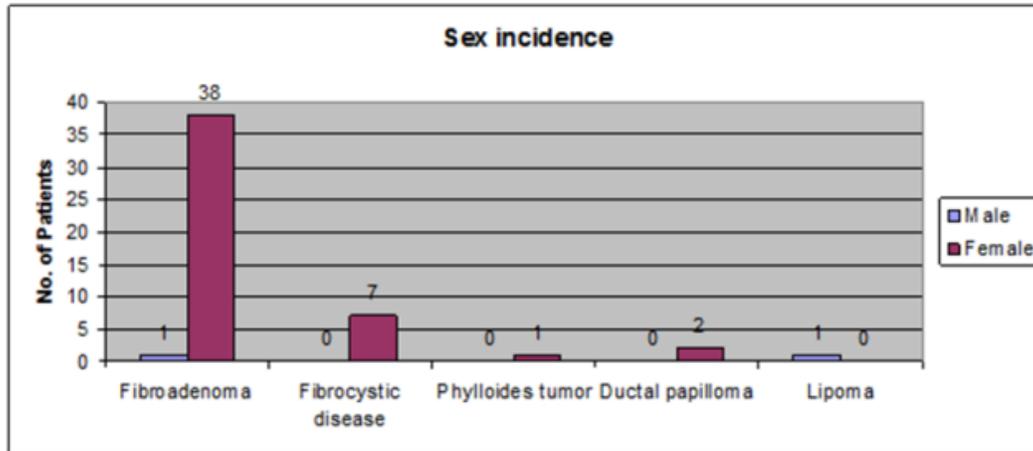
### 1. Type of Lesion



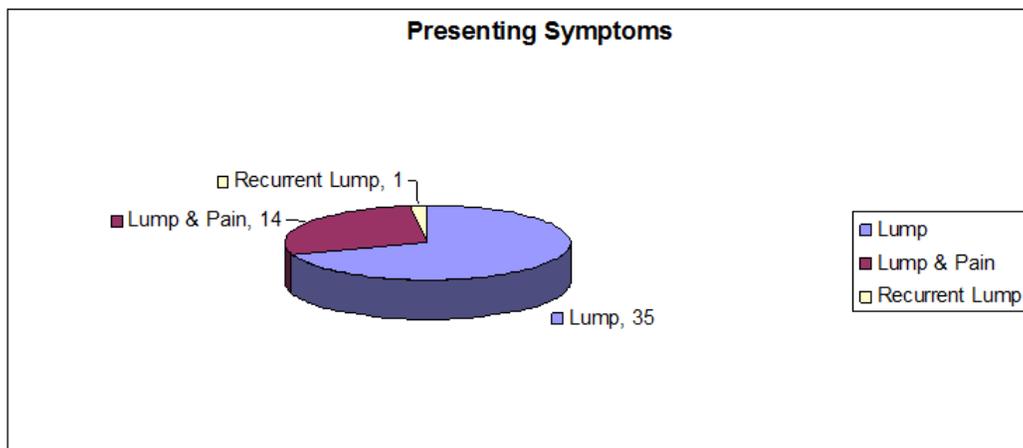
### 2. Age spectrum



### 3. Sex spectrum



### 4. Presenting Symptoms



### 5. Treatment

Disease	Excision	Wide local excision	Simple Mastectomy	Microdochotomy
Fibroadenoma	37	1	1	-
Fibrocystic Disease	7	-	-	-
Phylloides Tumor	1	-	-	-
Ductal Papilloma	1	-	-	1
Lipoma	1	-	-	-

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