

Study of Benign Breast Diseases from a Clinicopathological Perspective and Considering Management

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Abstract: *The purpose of this research is to examine the clinicopathological relationship between benign breast disease (BBD) and management, using a hospital based prospective approach at the department of general surgery, Fakhruddin Ali Ahmed Medical College & Hospital, Barpeta, Assam over one year. Study group includes 88 cases of benign breast diseases. Confirmation of diagnosis was made on the basis of history, clinical examination and FNAC. The commonest benign breast lesion encountered was fibroadenoma (62.5%) followed by fibrocystic disease (15.91%), followed by breast abscess (12.50%). The commonest mode of presentation was lump (94.32%) in the breast followed by mastalgia (34.09%). In the management of the BBD, all the 14 cases of fibrocystic disease were treated conservatively and 74 cases were managed surgically including 55 cases of fibroadenoma, 11 cases of breast abscess, 4 cases of benign phyllodes, 3 cases of lipoma and 1 case of breast cyst.*

Keywords: Benign Breast disease, Fibroadenoma

1. Introduction

Benign breast disease (BBD) is the most common cause of breast problems seen in women. Upto 30% of women will suffer from a BBD requiring treatment at some time in their lives⁽¹⁾. It can affect both males and females but is commonly seen in age group >12 years of age. Breast swelling in male is known as Gynecomastia. Benign breast diseases are largely hormone induced. So after menopause and cessation of ovulation, dramatic decrease in the incidence is seen. However, menopausal hormone therapy (Postmenopausal hormone use) and a family history of benign breast conditions predisposes to benign breast diseases⁽²⁾.

The breast has long been associated with femininity and maximum fertility. Therefore, anxiety of mutilation and loss of femininity is caused by both breast disease and breast surgery. Because of increased public awareness of breast cancer in recent years, benign breast illnesses have gained relevance. The two most typical symptoms are edema and discomfort. Pain and edema are symptoms of benign breast illnesses. Non-proliferative and proliferative breast lesions with or without atypia were both included in benign breast disorders. and atypia - accompanied proliferative breast lesions.

Aim & Objective:

To study the different types, clinical presentation & evaluate various modes of management of Benign Breast Diseases and their pathological variations.

2. Material & Methods

- 1) **Place of Study:** FAAMCH, Barpeta, Assam
- 2) **Duration of Study:** One year
- 3) **Type of study:** Hospital based prospective study
- 4) **Sample Size:** 88

Inclusion criteria:

- 1) All female patients above 12 years of age attending General Surgery OPD with presentation of Breast lump, breast pain or nipple discharge

Exclusion Criteria:

- 1) Women with any malignant diseases diagnosed before or during the course of the disease.
- 2) Male patients will be excluded from this study.
- 3) Patients not giving consent for the study.

Method of Collection of Data

- a) Detailed history was taken and a thorough physical examination as per a structured pre-prepared proforma.
- b) Consent was taken from patients for inclusion in the study.

3. Result

- 1) **Types of Benign Breast Diseases**

LESION	Number of Cases	Percentage (%)
Fibroadenoma	55	62.50
Fibrocystic disease	14	15.91
Breast abscess	11	12.50
Benign Cystosarcoma Phyllodes	4	4.55
Lipoma	3	3.41
Breast cyst	1	1.14
Total	88	100.00

2) Age Distribution Benign Breast Diseases

Lesions	Age (in years)				
	12 - 20	21 - 30	31 - 40	41 - 50	>50
Fibroadenoma	23	21	10	0	1
Fibrocystic disease	4	7	0	2	1
Breast Abscess	1	7	3	0	0
Benign Cystosarcoma Phyllodes	1	2	0	1	0
Lipoma	1	0	0	2	0
Breast Cyst	0	1	0	0	0
Total	30	38	13	5	2
Percentage	34.09	43.18	14.77	5.68	2.27

3) Side wise distribution of symptoms

Lesion	Right	Left	Bilateral
Fibroadenoma	29	18	8
Fibrocystic Disease	7	7	0
Breast Abscess	6	5	0
Benign Cystosarcoma Phyllodes	3	1	0
Lipoma	3	0	0
Breast Cyst	0	1	0
Total (n=88)	48	32	8
Percentage (%)	54.55	36.36	9.09

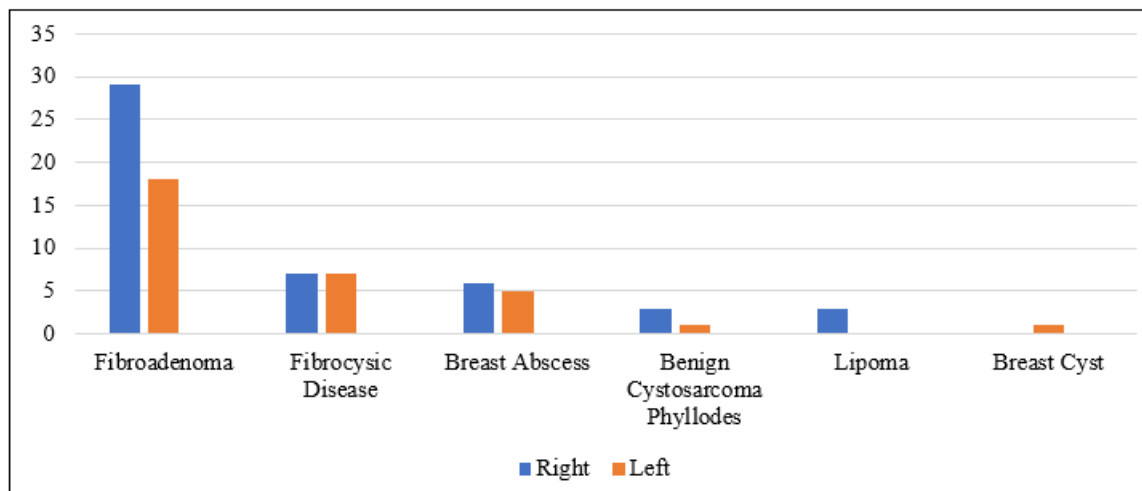


Figure 1.0: Bar Chart showing side wise distribution of symptoms

4) Mode of presentation

Symptoms	Number of cases (n=88)	Percentage (%)
Lump	58	65.91
Pain	5	5.68
Lump+Pain	14	15.91
Lump+Pain+Fever	11	12.50
Total	88	100

6) Clinico - histological correlation of fibroadenoma

Clinical Diagnosis	Consistent with fibroadenomas as histopathological Diagnosis	Inconsistent with fibroadenoma as histopathological Diagnosis
Positive	47	2
Negative	8	5

5) Histological Types of Fibroadenoma

Histological Types	Number of Cases	Percentage (%)
Pericanalicular	23	41.82
Mixed	18	32.73
Intracanalicular	14	25.45
Total	55	100.00

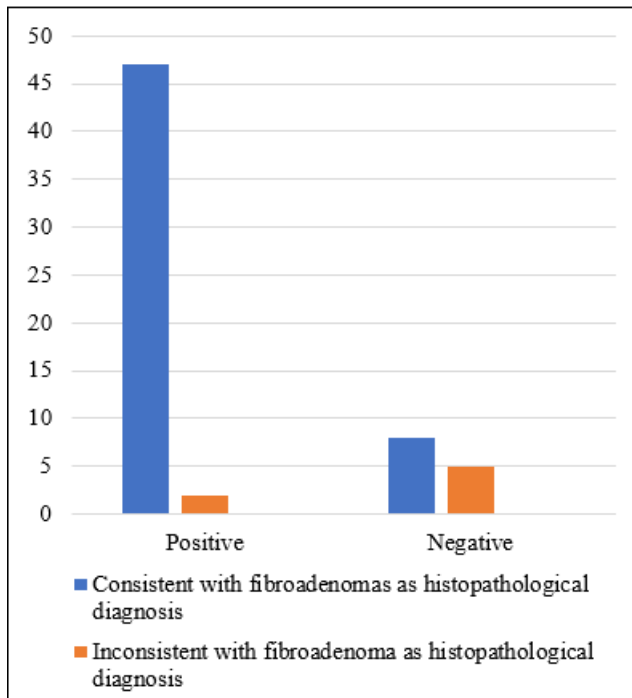


Figure 1.1: Bar chart showing clinico - histological correlation of fibroadenoma

7) Cyto - histological correlation of fibroadenoma

FNAC	Consistent with fibroadenomas as histopathological diagnosis	Inconsistent with fibroadenoma as histopathological diagnosis
Positive	51	1
Negative	4	6

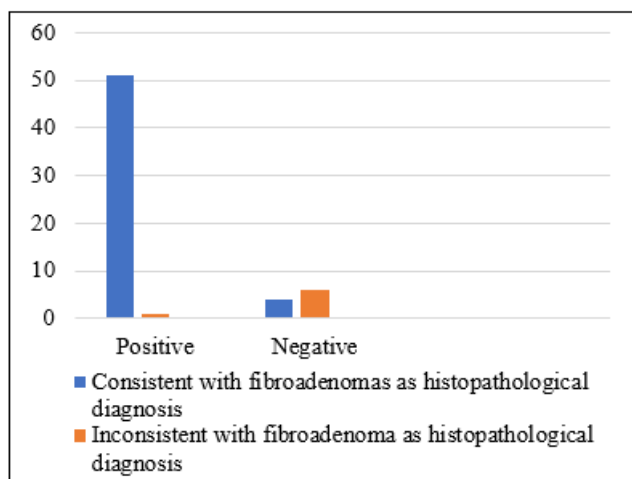


Figure 1.2: Bar chart showing Cyto - histological correlation of fibroadenoma

8) Conservative Management

Conservative Management	Number of cases	Percentage (%)
Evening Primrose	14	100
Vitamin E	14	100
Analgesic	14	100

9) Surgical Management

Surgical Management	Number of cases	Percentage (%)
Local Excision	57	77.03
Wide Excision	3	4.05
Simple Mastectomy	3	4.05
Incision & Drainage	11	14.86
Total	74	100.00

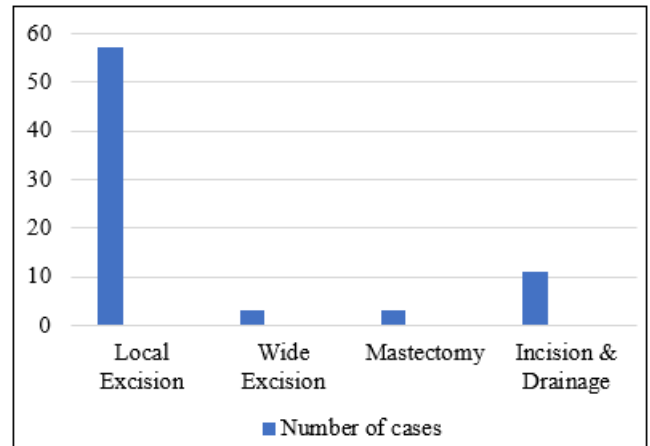


Figure 1.3: Bar chart showing number of cases undergoing surgical management

4. Discussion

This study consists of total of 88 cases of BBD studied for 1 year period at dept of general surgery, FAAMCH, Barpeta. In the present study the most common benign breast disorder was fibroadenoma 62.5% (55 cases) followed by fibroadenosis 15.91% (14 cases), breast abscess 12.5% (11 cases) and then by cystosarcoma phyllodes 4.55% (4 cases).

Fibroadenoma was the most common benign breast disorder encountered in the present study. Also according to Sangma et al (2009) the incidence of fibroadenoma was 48% and fibroadenosis was 18%⁽³⁾.

The next common BBD in the present study was fibroadenosis followed by breast abscess. The other rare BBD was phyllodes tumour in the present study and is almost comparable to the study conducted by Selvakumaran et al (2017)⁽⁴⁾. Haagensen et al (1971) recorded an incidence of 2.3% that shows almost similar incidence with the present study⁽⁵⁾.

In the present series 3 cases of lipoma were found out of 88 cases, which constitute only 3.41% and occurrence of which is almost comparable with Symmer's series, (1978)⁽⁶⁾ the incidence of lipoma was 2 out of 715 cases (0.11%) and Abhijit MG et al (2013)⁽⁷⁾ series where only 1 case (0.9%) of lipoma was present out of 110 cases. In the present series 1 case of breast cyst was found out of 88 cases, which constitute only 1.14% and occurrence of which is almost comparable with the study conducted by Selvakumaran et al (2017) where they encountered 2 lipomas (1.2%) out of 168 cases⁽⁴⁾.

The age distribution of fibroadenoma in the present study shows that, it is most frequent between 11 to 30 years of age (80%), which is in accordance with the ANDI classification,

where fibroadenomas are classified under disorders of development and hence seen in the early reproductive age group.

The lump in the breast was the predominant symptom, present in 83 cases (94.32%) and only 5 patients (5.68%) did not notice any lump but complaints of only pain and were diagnosed as fibroadenosis. Pain was the next common symptom and was present in 30 cases (34.09%) of the patients, which was almost comparable to other studies. In patients with fibroadenosis, 9 cases (64.28%) complained of lump & pain where as 5 cases (35.71%) of the patients had only pain. All the 11 (100%) cases of breast abscess presented with lump, pain and fever. Sangma et al (2013) also recorded incidence of 63% complaining of lump, 9% complaining of pain and 20% complaining of lump with pain that shows almost similar incidence with the present study⁽³⁾.

In present study, FNAC was done for all 88 cases and histopathological examination was done for 62 cases and all the FNAC reports were indicative of benign nature of the lesion.

Clinico - Histological Correlation showed 85.45% sensitivity, 71.42% specificity, PPV = 95.91% and NPV = 38.46% in the present study.

Cyto - Histological Correlation showed 92.72% sensitivity, 85.71% specificity, PPV = 98.07%, NPV = 60.00%.

As shown above, FNAC is a very useful tool in diagnosing benign breast diseases and in differentiating benign diseases from malignancy. It is a more accurate diagnostic tool as compared to clinical findings and can avoid unnecessary surgery. However compared to biopsy and histopathological examination, FNAC is less accurate. Hence recently, trucut biopsy is being preferred over FNAC as more tissue is obtained for examination with diagnostic accuracy similar to HPE.

In this study of 88 cases of BBD, 14 cases of fibroadenosis managed conservatively with Cap. Evening primrose oil, Vit. E capsules and analgesics; and all other cases were managed surgically.

In the present series of 55 cases of fibroadenoma, 53 cases were treated with local excision of the lump and 2 were treated with wide local excision of the lump due to large size and multiple lumps. Most of the cases were excised by circumareolar incision, but in a few cases which were difficult to excise by the circumareolar incision and were excised by radial incision.

Out of 4 cases of Cystosarcoma phyllodes, 3 underwent simple mastectomy and 1 underwent wide local excision under general anaesthesia. All the 11 cases of breast abscess had undergone incision and drainage along with antibiotic and analgesics and the pus was sent for culture and sensitivity.

A correlation between clinical diagnosis and histopathological diagnosis showed that clinical diagnosis had Sensitivity of 85.45%, Specificity of 71.42%, PPV shows 95.91%, NPV shows 38.46% & a correlation between FNAC

and histopathological diagnosis showed that FNAC had Sensitivity of 92.72%, Specificity of 85.71%, PPV shows 98.07%, NPV shows 60.00%. In a study by Selvakumaran et al (2017)⁴ sensitivity and specificity of FNAC in diagnosing fibroadenoma were determined to be 89.8% and 87.8%. Positive predictive value (PPV) of FNAC in identifying fibroadenoma was 94.2%. In a study by Nguansangiam et al (2009)⁸ overall sensitivity was 92.5%, specificity=90.2%, PPV =88.1%, NPV =93.9%.

5. Conclusion

Benign breast disease (BBD) occupy majority of total breast diseases. Fibroadenoma is the commonest benign breast lesion encountered followed fibrocystic disease and breast abscess. BBD's like cystosarcoma phyllodes, lipoma and breast cyst are rare. Lump in the breast is the commonest presentation of BBD and followed by mastalgia. Fine needle aspiration cytology is the sensitive, simple and cost-effective investigation of choice in benign breast diseases with sensitivity 92.72%. Conservative treatment is one of the best options in cytologically confirmed cases of fibrocystic disease. Surgery in the form of excision is the best treatment for majority of the BBD's. Incision and drainage of breast abscess along with appropriate antibiotics and analgesics is an appropriate approach of management for breast abscess.

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