Original article:

Clinico-investigative study of benign breast diseases in Pravara Rural Hospital, Loni

Chintan Sangoi[1] , Gokul Jorwekar[2*]

1- Resident doctor, Department of General surgery, Pravara Rural Medical College, Loni, Maharashtra, India.

2- Professor and Head, Department of General surgery, Pravara Rural Medical College, Loni, Maharashtra, India.

*Correspondence: Dr. Gokul J Jorwekar

ABSTRACT:

INTRODUCTION: With an alarming increase in incidences of breast lumps, the increasing awareness about breast malignancies and a major cause of concern in women's has led to increase in detection of benign breast lumps at a very early age. >50% of women suffer from benign breast disease during their life time.

METHODS: This was a prospective study conducted in the department of General Surgery at Pravara Rural hospital, Loni from September 2017 to September 2019 in 100 females with benign breast lumps. These cases were evaluated by a thorough clinical examination, Ultrasonomammography and Fine Needle Aspiration Cytology. All patients underwent a excision biopsy and all the above findings were correlated with a final histopathological diagnosis.

RESULTS: Fibroadenoma was the most common benign breast disease seen in second and third decade followed by fibroadenosis which presented a decade later. The most common presenting symptom was lump in breast followed by mastalgia and nipple discharge.The sensitivity and specificity of our clinical diagnosis with histopathological diagnosis was 78.87% and 13.79% respectively. Acurracy was 60% with a PPV of 69.14% and NPV of 21.05%.

CONCLUSION: A thorough clinical examination and the multimodality approach including triple assessment in evaluation of breast lumps provides a quick diagnosis in these patients and it alleviates the unnecessary anxiety of malignancy from patients with breast lumps. Also, clinical examination alone can be as accurate as other diagnostic modalities though a confirmation of diagnosis is very essential in the era of evidence based medicine. Hence, clinical findings, USG and FNAC are together a useful and effective approach in evaluating a case of benign breast lump.

KEYWORDS: Benign breast disease, breast lump, triple assessment, fibroadenoma.

INTRODUCTION:

Benign breast disease (BBD) is one of the common problems in women. It is 4-5 times more common than cancer,[1] it has been stated that, more than 50% of women suffer from this disease at some time or other during their life time. It can affect both male and female, no age group is immune. It can affect even the neonates. Hypertrophy of breast in them is supposed to deliver the witch's milk. BBD are primarily a phenomenon seen in the reproductive period of life. They are thought to be largely hormonally induced, so that after menopause and cessation of clinical ovarian stimulation there in dramatic decrease in their incidence.

There is no satisfactory classification for BBD and this all-inclusive term "Fibrocystic disease" is often used on the basis of the histological findings of fibrosis, cyst formation, epithelial activity in the biopsy specimen. **Santen[2]** demonstrated presence of a histological changes of fibrocystic disease throughout the life of the women. Presence of

a wide variety of synonyms, inability of the clinicians to separate clinical from histological terms, further prevented development of knowledge regarding BBD.

As the understanding and classification of the benign breast disorders improves, more effective treatment becomes possible and patients derive more benefit from these efforts. The present study of benign breast diseases is one of such attempts to understand them.

MATERIALS AND METHODS:

Present study was a descriptive study which was conducted at Pravara Rural Hospital, Loni Bk. from September 2017 to September 2019.

First 100 female patients diagnosed with benign breast diseases were included in this study.

Patients of benign breast diseases will have detailed history, thorough clinical examination to arrive at provisional diagnosis. Followed by Sonomammography and FNAC will be carried out

After confirmation of diagnosis, medical or surgical treatment will be carried out Observations will be done.

Prior approval of Institutional Ethical Committee [IEC] was taken.

Inclusion criteria:

- Female patients with benign disease of breast.
- Patients ready to give informed consent.

Exclusion criteria:

- Patients lost to follow up

Written and informed consent was taken, Preformed proforma was maintained.

Thorough Clinical findings, investigational workup including Mammography, Fine needle aspiration cytology, Ultrasonography, operative findings if operation was done and postoperative complications were noted.

Collected data was analyzed.

Observations and results were tabulated with graphic representation.

RESULTS:

Table No. 1: Age wise distribution

Age	**Frequency**	**Percent**
<20 yrs	18	18.0
20-30 yrs	47	47.0
30-40 yrs	27	27.0
40-50 yrs	7	7.0
>50 yrs	1	1.0
Total	100	100.0
Mean±SD	**27.74±7.44**	

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Table No. 2: Symptoms

Symptoms	Frequency	Percent
Lump	76	76.0
Pain	18	18.0
Discharge	6	6.0
Total	100	100.0

Overall, 74% of the benign breast diseases presented in the second and third decades of life. The number of patients presenting in the second decade (47%) was significantly higher than that of the other age groups. Only 08 patients (8%) presented after 4th decade of life. The mean age group for benign breast disease in this study was 27 years. The lump in the breast was the predominant symptom found in 76 patients (76%), Pain was the next common symptom and was present in 18 cases (18%) of the patients. Discharge was seen in 6 cases (6%).

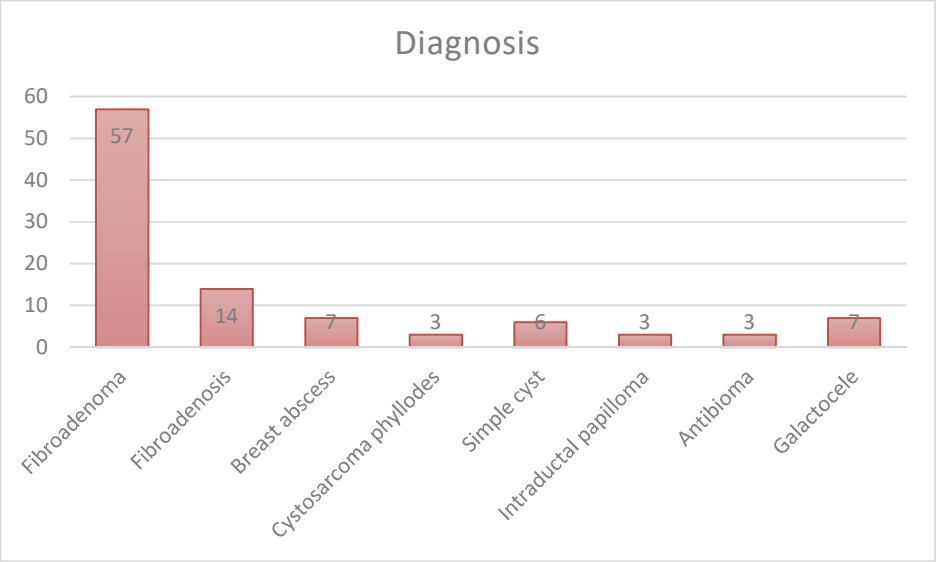

Chart no 1: Diagnosis wise distribution

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Table 3: Correlation of mammography with FNAC.

		Mammography		Total
		Negative	Positive	
FNAC	Positive	16	84	100
Total		16	84	100

Statistic	Value	95% CI
Sensitivity	100.00%	95.70% to 100.00%
Specificity	0.00 %	0.00% to 20.59%
Positive Predictive Value	84.00%	84.00% to 84.00%
Negative Predictive Value	0%	
Accuracy	84.00%	75.32% to 90.57%

Table no 4: Correlation of Provisional (Clinical) diagnosis with post-operative histopathological report [HPR].

		Histopath		Total
		NA	Pos	
Clinical	Neg	4	15	19
	Pos	25	56	81
Total		29	71	100

Statistic	Value	95% CI
Sensitivity	78.87%	67.56% to 87.67%
Specificity	13.79 %	3.89% to 31.66%
Positive Predictive Value	69.14%	64.97% to 73.02%
Negative Predictive Value	21.05 %	8.81% to 42.39%
Accuracy	60.00%	49.72% to 69.67%

DISCUSSION:

In our study 74% of the benign breast diseases presented in the second and third decades of life. The number of patients presenting in the second decade 47% was significantly higher than that of the other age groups.

- Guptha JC et al[3] study shows 85% of the patients were in the age group of twelve to forty years.
- Tibor Decholnoky[4] reported a similar age distribution. 83.3% fibroadenomas were present in the age group of 11-30 years.
- Rangabhashyam N, GnanaPrakasan D et al[5] in the Madras Journal reported as 82%.

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- Haagensen CD[6] reported corresponding figure as 70%. in this study.

In the present study, the commonest presentation of BBD was lump in the breast constituting 76% followed by pain in 18%. There were 6 cases (6%) of nipple discharge in this study 2 case being fibroadenosis and the other 4 were galactocele

- According to Haagensen CD[6] lump was common type of presentation.
- Tibor Decholnoky's[4] noted pain in 33% of his patients.
- Geschitcekter CF[7] noted 4% has nipple discharge.
- Tibor Decholnoky[4] study has no patients with nipple discharge.

Fibroadenoma (57%) was the most commonest BBD encountered while fibroadenosis constitute 14% of the patients in our study. In the current study 6 gross cysts were encountered.

- According to Guptha JC et al[3] the incidence of fibroadenoma is 64% and fibroadenosis 22%.
- According to Rangabhashyam N, Gnanaprakasam D et al[5] the incidence of fibroadenoma is 56.7% and fibroadenosis 14.2%.
- Soju F Oluwole[8] reported similar figures in American black.

In our study, Sonomammo-cytological correlation showed 95.70% sensitivity, 20.59% specificity, PPV=84%, NPV=0%. The sensitivity of ultrasound in diagnosing fibroadenoma was 75% in study done by Gonzanga[9] et al and 81.8% in study done by Mansoor[10] et al. In a study done by Kailash[11] et al, sensitivity, specificity and positive predictive values of ultrasound in fibroadenoma of breast were 81.6%, 94.7% and 91.2% respectively.

Clinico histopathological correlation showed 78.87% sensitivity, 13.79% specificity, PPV = 69.14% and NPV = 21.05%, Accuracy = 60%.

According to Lopez-Ferrer P, Jimenez-Hefferman JA et al[12] cytohistolic agreement was present in 287 of the 362 cytodiagnosis. Lack of correlation was observed in 75 cases. The sensitive of the cytologic diagnosis of fibroadenoma was 86.9% with PPV 79.3%. The specificity of the cytologic diagnosis of fibroadenoma reaches 93.8% with NDV = 96.3%.

CONCLUSION:

Use of Triple Assessment including Breast examination, Mammography-Sonography, Cytology are most important in workup of the patients presenting with Benign Breast Disease's.It Immensly helps in deciding management of Benign lump and reduces the rate of unnecessary surgical interventions.

Therefore, to improve diagnostic accuracy, close collaboration amongst clinicians, radiologists and pathologists was found useful.

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