

Original Article

Spectrum of Benign Breast Diseases in Females of Reproductive Age Group

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ABSTRACT

Background: Benign Breast disease constitute a significant entity, since these lesions are far commoner than malignant breast lesions and some of them pose risk of developing malignancy in later life.

Aim: To study the frequency of various benign breast diseases in the females, to analyse the percentage of incidence of various benign breast lesions, the age distribution and different mode of presentation.

Materials and Methods: A total of 74 patients were diagnosed with benign breast lesions both by fine Needle Aspiration cytology (FNAC) and Histopathology over a period of one year in a tertiary care centre were the participants of this study. The findings were tabulated in excel sheet and analyzed for the frequency of each lesion, their distribution in various age group.

Results: The spectrum of Benign breast diseases diagnosed were Fibroadenoma - 55.4% (n=41), Fibrocystic disease - 27% (n=20), Phyllodes Tumour - 5.4% (n=4), Florid Ductal hyperplasia of the usual type - 4% (n=3), Intraductal papilloma - 2.7% (n=2), Breast abscess - 2.7% (n=2), Granulomatous mastitis - 1.4% (n=1) and Lactating adenoma - 1.4% (n=1). The mode of presentation of the patients was Lump in the breast - 54% (n=40), Vague mass with pain - 23% (n=17), discharge from nipple 12% (n=9) and pain in the breast-11% (n=8). Regarding the laterality of the breast disease, 47.2% (n=35) were on right side, 50% (n=37) were on left side and 2.8% (n=2) were bilateral.

Conclusion: It is essential to recognize the significance of Benign Breast disease to segregate the high risk group of patients for whom a regular surveillance is needed for an appropriate management.

Key words: Spectrum, Breast disease, Benign, Lump, Risk, Management

INTRODUCTION

Breast is a dynamic organ which undergoes cyclical changes under the influence of hormone and growth factors acting on the epithelial and stromal throughout the reproductive life of a woman [1].

Though the vast majority of the breast lesions are benign and far commoner than the malignant one, they are not given significant attention as compared to the malignant one. The significance of this entity is that around 50% of women in their life time would have had the sign or symptom of benign breast disease [2]. In fact some benign breast lesions can be a predisposing risk factor for developing malignancy in later part of life [2, 3]. So it is essential to recognize and study these lesions in detail which will help to segregate the high risk group of patients for whom a regular surveillance is needed for an appropriate management.

Aims and Objectives:

The primary objective of the study was to find the frequency of various benign breast diseases in females presenting with breast lump and to categorise them into proliferative and non-proliferative lesions. The secondary objective was to find the incidence and various mode of presentation of various benign breast lesions in different age groups.

MATERIAL AND METHODS

Sample size:

A total of 74 patients were diagnosed with benign breast lesions both by Fine Needle Aspiration Cytology (FNAC) and Histopathology over a period of one year in a tertiary care centre were the participants of this study

Methodology of the study:

This is a retrospective data based study done on patients who had confirmed diagnosis of benign breast lesions both by Fine Needle Aspiration Cytology (FNAC) and Histopathology. The nature of the lesion and clinical presentation of the lesion like presence of lump in the breast, mastalgia, nipple discharge and any associated findings were noted. The findings were tabulated in excel sheet and analysed for the frequency of each lesion, their distribution in various age group.

Ethical consideration:

All the samples were a part of routine diagnostic techniques, so ethical consideration was not necessary.

RESULTS

The spectrum of benign breast diseases diagnosed by FNAC and confirmed by subsequent Histopathological examination were shown in Table.1.

Table 1: Cytological spectrum of benign breast diseases diagnosed by FNAC and had a subsequent Histopathological examination

Type of lesion	Numbers	Percentage
Fibroadenoma	41	55.4
Fibrocystic disease	20	27
Phyllodes Tumour (Benign)	4	5.4
Florid Ductal hyperplasia of the usual type	3	4
Intraductal papilloma	2	2.7
Breast abscess	2	2.7
Granulomatous mastitis	1	1.4
Lactating adenoma	1	1.4
Total	74	100

In short, Fibroadenoma - 55.4% (n=41), Fibrocystic disease - 27% (n=20), Phyllodes Tumour - 5.4% (n=4), Florid Ductal hyperplasia of the usual type - 4% (n=3), Intraductal papilloma - 2.7% (n=2), Breast abscess - 2.7% (n=2), Granulomatous mastitis - 1.4% (n=1) and Lactating adenoma - 1.4% (n=1). The Age incidence of benign breast disease in this study was 6.8% (n=5) were between 11—20 years and 50 % (n=37) were between 21-30 years, 29.7% (n=22) were between 31-40 years and 13.5% (n=10) were between 41-50 years [Table.2].

Table 2: Age wise incidence of benign breast diseases

Age group	Numbers
11-20	5 (6.8)
21-30	37 (50)
31-40	22 (29.7)
41-50	10 (13.5)

(Figures in parenthesis are percentages)

The mode of presentation of the patients was Lump in the breast - 54% (n=40), Vague mass with pain - 23% (n=17), discharge from nipple 12% (n=9) and pain in the breast-11% (n=8). Regarding the laterality of the breast disease, 47.2% (n=35) were on right side, 50% (n=37) were on left side and 2.8% (n=2) were bilateral.

DISCUSSION

The term benign breast disease includes heterogenous group of lesions, some of them may even represent exaggerated physiologic phenomenon rather than a true pathological entity. Generally they can be broadly classified into Non proliferative and Proliferative lesions. Non proliferative breast lesions includes Breast cysts, metaplastic epithelial change, epithelial related calcifications and mild ductal hyperplasia of the usual type. Proliferative breast lesions are extremely complex and interrelated group of disorders, some of which confer an increased risk of developing carcinoma breast in the future are thus considered as risk markers, rather than premalignant lesions.

In our study majority 37(50%) of the patients with Benign Breast disease were in the age group 21-30 and these findings are consistent with those of similar studies from Naveen et al[2], Shukla et al[3], Karki et al[4], Guray et al[5], Houssami et al[6] and Dahri et al[7]. The Age incidence of benign breast diseases in present study as compared with other studies is shown in Table. 3.

Table 3: Age incidence of benign breast diseases in present study as compared with other studies

Study	Peak Age incidence of Benign breast disease	Percentage in study population
Present Study	21-30	50%
Shukla et al(3)	21-30	43%
Naveen et al(2)	21-30	50%
Karki et al(4)	21-40	67%
Dahri et al(7)	21-30	44%

The most common mode of presentation of the patients was either Lump in the breast - 54% (n=40) or a vague mass with pain - 23% (n=17). Rest of the patients presented with discharge from nipple 12% (n=9) and pain in the breast-11% (n=8). Regarding the laterality of the breast disease, 47.2% (n=35) were on right side, 50% (n=37) were on left side and 2.8% (n=2) were bilateral.

The most common lesion in this study is Fibroadenoma constituting to 55% of the total cases. Among Fibroadenoma, majority of the cases [32 cases (78%)] were seen in the age group of 15 – 30 years and rest were seen in 30-40 years age group. This finding is consistent with Naveen et al [2] and Khanzada et al [8]. However these findings differ from that of Krishnaswamy et al [9], Shukla et al [10] and Khanna et al [11]. The origin of Fibroadenoma has been postulated that it may arise for Bcl-2 positive mesenchymal cells of the Breast [12]. A simple Fibroadenoma does not confer additional risk of malignancy, whereas a complex fibroadenoma poses a slight higher risk of developing malignancy [13]. Increase in awareness about Breast lumps and growing concerns for detecting Breast malignancies at an earlier stage has led to the early detection and evaluation of Breast mass.

Fibrocystic disease was the second most common Breast lesion in our study which is similar to the findings of Naveen et al [2]. Fibrocystic disease is common in females of age group 20-50[5, 14] which often occurs multifocal and bilateral. Hormonal imbalance plays a major role in the pathogenesis with oestrogen predominance over progesterone [15]. Though this has been called by many names as Cystic mastopathy, Reclus's disease, chronic cystic disease and Mazoplasia for many years the term Fibrocystic disease is preferred because of the characteristic clinical and Histopathological findings observed in 50% of the patients clinically and 90% histologically[16,17]. This entity poses a low risk of development of Breast cancer later in life [5].

Phyllodes tumour constituted 5.4% (4 cases) in this study. Phyllodes tumour can have a spectrum of changes and it is important to recognize infiltration, cytologic atypia and increased mitotic activity to predict the recurrent and malignant behaviour which is often treated by mastectomy [18, 19].

Florid Ductal hyperplasia of the usual type is increase in the ductal epithelial cells without any distortion of the duct architecture and it usually does not increase the risk of malignancy. In our study we had 3 cases (4%) of this entity [5]. We had 2 cases (2.7%) of Intraductal papilloma. They usually arise from the terminal ends of the ducts and ductules. The risk of developing atypical hyperplasia and in situ carcinoma in an otherwise benign papilloma is still a topic of controversy [20].

In our study we had 3 inflammatory lesions, 2 cases (2.7%) of Breast abscess and one case (1.4%) of Granulomatous mastitis. Acute mastitis involves the inflammation of the interlobular connective tissue of

the breast and if not properly managed can lead to septicemia [21]. Wegener's Granulomatous mastitis can be caused by different type of infectious organisms, Sarcoidosis, Wegners Granulomatosis and Foreign bodies [22, 23]. We also had one case (1.4%) of Lactating adenoma. This tumour can occur as a solitary or multiple masses during pregnancy or puerperium. It does not usually recur after excision and its malignant potential is not proven [24].

CONCLUSION

Majority of the breast lesions are benign and commoner than the malignant one. Fibroadenoma (55.4%) was the most common benign breast disease in this study followed by Fibrocystic disease – 20 (27%). Majority of the patients presented with Lump in the breast (54%). There was no significant difference in laterality with respect to occurrence of the benign breast disease.

Recommendation:

It is essential to recognize the significance of Benign Breast disease to segregate the high risk group of patients for whom a regular surveillance is needed for an appropriate management.

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