Profile of benign breast disease in Uttarakhand

Authors
Dr Dinesh Singh Chauhan[1*], Dr Navneet Jain[2]
[1]Senior Resident, Dept. of General Surgery, GDMC Dehradun, Uttarakhand
[2]Associate Professor, Dept. of General Surgery, GDMC Dehradun, Uttarakhand
*Corresponding Author
Dr Dinesh Singh Chauhan
Address: Government Doon Medical College and Hospital Dehradun Uttarakhand Pin 248006, India
Email: *drdinesh0225@gmail.com*

Abstract
Background: *Benign breast lesions are the most common breast disease in females. This study was conducted to study the clinical profile and pattern of benign breast disease and its pathological correlation.*

Methods: *One hundred five females who attended the Surgery Outpatients Department in Government Doon Medical College, Dehradun, with various forms of benign breast diseases during the period from October 2017 to September 2018, were studied. Early diagnoses by doing a triple assessment like a clinical examination, FNAC or a core needle biopsy and imaging methods like ultrasonography or mammography, were made within 72 hrs from the first consultation. The clinical diagnoses were compared with final diagnosis.*

Results: *Out of the 105 female patients who were studied, 46.66% patients were in the age group of 21 to 30 years. 63.80% patients presented with breast lumps and fibroadenoma, accounted for 46.66% of the cases, which was the highest number of patients. Fibrocystic changes and breast abscesses came next with 29.52% and 6.66% cases respectively. The right breast was involved in 45 (42.85%) patients, and upper outer quadrant was most commonly involved (59.04%).*

Conclusion: *Results grossly similar to other parts of the word were obtained. Benign breast diseases are common in female patients in the second followed by third decade of their life. Breast lump is the most common presentation involving the upper outer quadrant and of all the benign breast diseases fibroadenoma is the commonest of them all. Triple assessment provided a quick diagnosis and it alleviated unnecessary anxiety from the patients about breast cancer. Breast self-examination and education to the females is required for early diagnosis and prompt treatment as majority of anxiety and worry of having breast cancer can be alleviated.*

Keywords: *Benign breast disease, Fibroadenoma, Fibroadenosis, Triple assessment.*

Introduction

The breast has always been the symbol of womanhood and ultimate fertility. As result both, disease and surgery of the breast evoke *a fear of mutilation* & *loss of femininity*. Benign breast diseases account for about 80 % of the breast pathology. Very few benign breast diseases have an ability to become malignant, but the majority

are treated easily without adverse consequences. However, management of some benign breast diseases proven to be troublesome and associated with high psychological morbidity. A triple assessment which is done by a clinical examination imaging like ultrasonography (USG) or mammography and a pathological examination – FNAC or core needle biopsy, during the initial consultation, allows a majority of the patients with discrete BBDs to be given immediate reassurance. Mammography, often in conjunction with ultrasound examination[1], [2], [3], [4] is required for evaluation of discrete palpable lesions in women over 35 whereas ultrasound provides an optional substitute in younger women[5]. Round dense lesions on mammography often represent cysts which require only ultrasonography to distinguish them from solid lesions. Complex cysts containing both fluid and solid matter require biopsy. For solid lesions, radiographically or ultrasonically directed core biopsy provides highly discriminative information regarding the presence or absence of malignancy. Pathologically, BBD is divided into nonproliferative disease, proliferative disease without atypia, and proliferative disease with atypia.[6],[7] [8]. The risk of breast cancer is higher in proliferative disease, especially atypical proliferative lesions.[6],[9]

In this study, we profiled the incidence of BBDs, the relative frequencies of the different types of BBDs and their clinical features. Secondly, we attempted at correlating the clinical and pathological findings wherever possible.

Materials and Methods

This study was conducted in Government Doon Medical College, Dehradun, Uttarakhand (Devbhoomi), India located at the foothills of the Himalayan mountain ranges, and it is largely a hilly State. The study was conducted for one year period from October 2017 to September 2018. Informed consent was taken from the patients under study. Females of all age group with any complaint relating to breast were included in the study. Women with an obvious malignant disease or those who had been treated for malignancy earlier, were excluded in this study. After a detailed history and a thorough physical examination one or more of the special investigations– FNAC, mammography, ultrasound or a core-needle biopsy were carried out for the confirmation of the diagnosis. Surgery was done when indicated and the specimen was subjected to histopathological examination.

Results

Age distribution

The present study group comprised of 105 female patients with benign breast disease. Benign breast disease was commonly seen in the age group of 21-30years constituting 46.66% of all patients followed by 23.80% cases in age group of 31-40years. The age distribution pattern of benign breast disease is depicted in Table 1.

Table 1 Age distribution pattern of benign breast disease

Age in years	No. of patients	Percentage
1. 11-20	11	10.47
2. 21-30	49	46.66
3. 31-40	25	23.80
4. 41-50	13	12.38
5. 51-60	7	6.66
Total	105	

Clinical presentation

The most common clinical presentation was lump in the breast.67 patients (63.80%) presented with lump in the breast without any other complaint followed by 14 patients (13.33%) who complained of a lump with associated pain. The type of presentation is depicted in Table 2.

Table 2 Type of presentation with incidence

Presentation	No. of patients	Percentage
1. Breast lump only	67	63.80
2. Breast lump +pain	14	13.33
3. Breast lump +nipple discharge	7	6.66
4. Breast pain only	11	10.47
5. Nipple discharge only	6	5.71
Total	105	

Distribution pattern of benign breast disease

The most common benign lesion was fibroadenoma constituting 46.66% of the cases followed by fibroadenosis 29.52% cases. The other benign lesions in the study group were breast abscess (6.66%), duct ectasia (4.76%), mastitis (4.76%), galactocoele (4.76%), simple cyst (1.90%) and sinus (0.95%) depicted in Table 3.

Table 3 Distribution pattern of benign breast disease

Benign Breast Disease	No. of patients	Incidence percentage
Fibroadenoma	49	46.66
Fibroadenosis	31	29.52
Breast abscess	7	6.66
Duct ectasia	5	4.76
Mastitis	5	4.76
Galactocoele	5	4.76
Simle cyst	2	1.90
Sinus	1	0.95

Side wise and quadrant wise distribution

Among the 105 patients, the right breast was affected in 45 (42.85%) patients, while the left breast was affected in 40 (38.09%) patients. In 20 (19.04%) cases, both the breasts were affected, as shown in table 4. Most benign lesions were found in the upper outer quadrant 59.04% followed by central quadrant 14.28% as shown in Table 4.

Table 4 Side and quadrant wise distribution of benign breast disease

Side Involved	No. of cases	Percentage
Right breast	45	42.85
Left breast	40	38.09
Both breast	20	19.04
Quadrant involved		
UOQ	62	59.04
UIQ	15	14.28
LOQ	10	9.52
LIQ	04	3.80
Central quadrant	19	18.09

Investigations

Out of 105 patients FNAC was done in 80 patients and the results were confirmed to be similar to the histopathologic examinations in 66 cases. Ultrasound was done in 25 patients where FNAC results were inconclusive and in patients with non palpable lesions. Mammography was done in only 8 patients. Core needle biopsy was done in patients where all the investigations were inconclusive with the aim to rule out malignancy.

Discussion

In the present study maximum number of patients (46.66%) were found in the age group of 21-30 years. This was almost similar to the observation which was made by Navneet Kaur et al.,[10]

The patients of BBDs generally present with one or more of these complaints – breast lump, breast pain or nipple discharge. In this study the most common presenting complain was breast lump (63.80%) followed by lump and pain (13.33%). Kulkarni et al[11] observed lump as main presenting symptom in most of the benign proliferative breast lesion, which is in accordance with this study.

In the present study fibroadenoma was the most common breast lesion constituting 46.66% of benign breast lesions. Similar findings were reported by Amr et al,[12] Kulkarni et al,[11] Malik et al.[13]. In their study they found most common benign breast lump was fibroadenoma. Amr et al[12] reported 30.7%, Kulkarni et al[11] 62.32%, Malik et al[13] 41 %, cases of fibroadenoma. In present study the most common age of fibroadenoma was second and third decade which is comparable to the above studies.

In the present study fibroadenosis was the second most common benign breast lesion 29.52% and the maximum age incidence was observed in the age group of 21 to 30 years. Naveen et al., (2013) and Rashid et al., (2005) noted fibrocystic disease as the second common BBD after fibroadenoma accounting for 36% and 17% respectively. Stern (1992) found fibrocystic disease as the most common in females of all ages especially in the middle age group.[14],[15]. Amr et al[12] reported maximum incidence of fibrocystic disease in 31-35 years.

Acute breast abscess was also found in seven patients and five of these patients were lactating. However, no case of gangrene breast is found in our study as compared to the study done by Shukla and Kumar[16] which reported two cases of

breast abscess progressing to gangrene as a result of neglect. This is a positive sign as it indicates higher awareness of patients with respect to conditions of the breast.

Upper outer quadrant was the commonest site of distribution of lumps (59.04%) when compared to the other quadrants. Decholonky T noted that 50% of the lumps in his study were in this quadrant of the breast.[17] Oluwole SF et al showed 60% of the lumps at this site.[18]

Conclusion

From the present study it is concluded that benign breast disease is most commonly seen in the age group of 21 to 30 years and majority of the patients present with breast lump followed by breast lump and pain. Fibroadenoma is the most common benign breast lesion encountered in clinical practice followed by fibroadenosis. Benign breast lesions are more common in the right breast and upper outer quadrant is mostly involved. Triple assessment provided a quick diagnosis and it alleviated unnecessary anxiety from the patients about breast cancer.

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