

# Clinical Spectrum and Management of Benign Breast Disease – A Prospective Study

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## Abstract

**Background:** The clinical spectrum and management of benign breast diseases (BBD) is multifactorial with various etiologies in woman, observed at different menstrual age groups.

**Materials and Methods:** A total of 220 women aged between 20 and 60 years having BBD were studied. Routine blood examination, radiological investigations include ultrasonography/mammography, pathological investigations (fine-needle aspiration cytology/histopathological examination) nipple discharge smears were carried out. Computed tomography scan/magnetic resonance imaging also done where necessary. Different BBDs were noted.

**Results:** A total of 198 (90%) were at menarche to menopause age. A total of 12 (5.4%) were at lactating. A total of 10 (4.5%) were at postmenopausal age, 24 (10.9%) had breast abscess, 4 (1.82%) had cold abscess, 7 (3.60%) cyclical mastalgia, 6 (2.73%) had duct papilloma, 2 (1.03%) duct papilloma + fibroadenoma, 76 (34.5%) had fibroadenoma, 14 (7.2%) fibroadenosis, 3 (1.36%) had galactocele, 81 (36.8%) had mastalgia, 2 (1.03%) had recurrent fibroadenoma, 1 (0.45%) had tubercular lesion, 17 (7.73%) had nipple discharges, 103 (46.8%) treated with medical management, 75 (34%) with surgery, and 42 (19%) with watch and wait therapy.

**Conclusion:** Most of the BBD can be managed with medical management but in resistant cases surgery was unavoidable and in certain cases one has to wait and watch.

**Key words:** Benign breast diseases, Malignancy, Mammography, Menarche, Menarche to Menopause, Menopause

## INTRODUCTION

Breast is a modified sweat gland and apocrine in nature. This modification often creates many breast disorders from menarche to menopause.<sup>[1,2]</sup> These disorders are mainly benign and less malignant. Benign breast disorders are the most confusing areas of the surgery.<sup>[3]</sup> Due to the advancement in technology such as computed tomography scan, magnetic resonance imaging, ultrasonography (USG)/mammography, and laboratory investigations like fine-needle aspiration cytology (FNAC)/histopathological examination (HPE) benign lesions can be differentiated from malignancy but various disorders of benign breast disorders

are multifactorial and challenge to the physician and surgeon due to various etiology and most of them are idiopathic.<sup>[4]</sup> Hence, attempt was made to study different types of benign breast diseases (BBD) at different menstrual age groups.

## MATERIALS AND METHODS

A total of 220 adult females aged between 20 and 60 years visiting Deen Dayal Upadhyay Hospital, Delhi, were studied for BBD.

### Inclusive Criteria

The females having BBD such as breast lump, breast pain, nipple discharge, itching around nipple, or axillary swelling were included.

### Methods

Detailed clinical examination routine laboratory and radiological findings were done after getting the consent in written form. All the patients were taught "Breast self-

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examination<sup>[5]</sup> by the principal investigator along with trained nurses.” The radiological examination was USG/ mammography and pathological investigations were FNAC/ HPE/ discharges smear (whenever necessary). The duration of study was from August 1, 2016, to December 1, 2017.

**Exclusion Criteria**

The following criteria were excluded from the study:

1. Women having malignancy of breast and immune-compromised diseases
2. Women who had been previously operated for malignancy.

**Statistical Analysis**

Various findings were classified using Microsoft SPSS 2007 software.

**OBSERVATION AND RESULTS**

Table 1 incidence of BBD observed in different age groups – 33 (15%) at age of 20 years, 103 (46.8%) at the age between 21 and 30 years, 60 (27.2%) at age between 31 and 40 years, 20 (9%) at the between 41 and 50 years, and 4 (1.8%) at the age between 51 and 60 years.

Table 2 incidence of BBD according to menstrual age – 198 (90%) were at menarche to menopause age (excluding pregnancy and lactation), 12 (5.4%) were at lactating, and 10 (4.5%) were at postmenopausal.

Table 3 incidence of BBD at menstrual age – breast abscess – 8 (4.12%) were at menarche to menopause age and 16 (88.8%) at lactating total of 24 (10.9%), cold abscess – 4 (2.06%) at menarche to menopause stage, and cyclical mastalgia – 7 (3.60%) at menarche to menopause stage – duct papilloma – 5 (2.57%) at menarche to menopause stage and 1 (11%) at postmenopausal age total of 6 (2.73%).

Duct papilloma+fibroadenoma – 2 (1.03%) were at menarche to menopause stage, fibroadenoma – 73 (37.8%) were at menarche to menopause stage, 3 (33.3%) were at postmenopausal total 76 (34.5%). Fibroadenosis 14 (7.21%) was at menarche to menopause, galactocele – 2 (0.52%) 1 (0.26%) at lactating stage, mastalgia – 76 (39.4%) at menarche to menopause, 5 (5.5%) at postmenopausal, recurrent fibroadenoma – 2 (1.03%) at menarche to menopause, and tubercular lesions 1 (0.51%) at menarche to menopause stage.

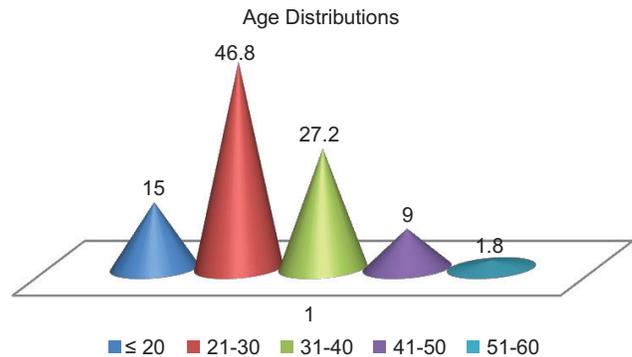
Table 4, the study of nipple discharge – 17 (7.73%) present, in 203 (92.2%) it was absent.

Table 5, the study of side distribution of BBD – 80 (36.3%) had left-sided, 90 (41.3%) had right, and 49 (22.2%) had both right and left-sided.

**Table 1. Incidence of benign breast diseases according age group (total number of patients -220)**

Age distributions	Frequency (%)
≤20	33 (15)
21–30	103 (46.8)
31–40	60 (27.2)
41–50	20 (9)
51–60	4 (1.8)

Highest frequency was observed in 21-30, (46.8%) group and least was in (1.8%) in 51-60 years



**Table 2. Incidence of benign breast diseases according to menstrual age (total number of patients 220)**

Age group	Frequency (%)
Menarche to menopause age (excluding pregnancy and lactation)	198 (90)
Lactating	12 (5.4)
Postmenopause	10 (4.5)

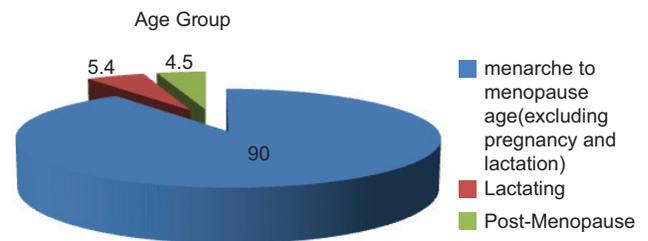


Table 6, the treatment of BBD patients – 103 (46.8%) was treated with medical management, 75 (34%) were surgery, and 42 (19%) were on wait and watch therapy.

**DISCUSSION**

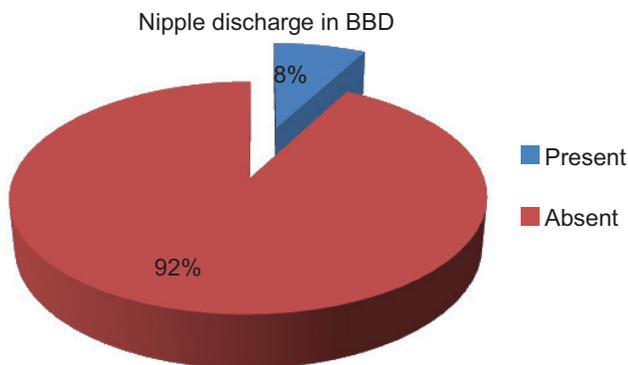
In the present study, BBD 33 (15%) at age of ≤20 years, 103 (46.8%) at the age between 21 and 30 years, 60 (27.2%) at age between 31 and 40 years, 20 (9%) at the between 41 and 50 years, and 4 (1.8%) at the age between 51 and 60 years [Table 1]. A total of 198 (90%) were at menarche to menopause age (excluding pregnancy and lactation). A total of 12 (5.4%) were at lactating, 10 (4.5%) were at

**Table 3. Incidence of different benign breast diseases according to menstrual age (total number of patients 220)**

Particular	Menarche to menopause age (excluding pregnancy and lactation) (%)	Lactating (%)	Post-menopause (%)	Total 220 (%)
Breast abscess	8 (4.12)	16 (8.88)	0	24 (10.9)
Cold abscess	4 (2.6)	0	0	4 (1.82)
Cyclical mastalgia	7 (3.60)	0	0	7 (3.60)
Duct papilloma	5 (2.57)	0	1 (11.1)	6 (2.73)
Duct papilloma+Fibro adenoma	2 (1.03)	0	0	2 (1.03)
Fibro adenoma	73 (37.8)	0	3 (3.33)	76 (34.5)
Fibro adenoma	14 (7.21)	0	0	14 (7.21)
Galactocele	2 (0.52)	1 (0.23)	0	3 (1.36)
Mastalgia	76 (39.4)	0	5 (5.5)	81 (36.8)
Recurrent fibroadenoma	2 (1.03)	0	0	2 (1.03)
Tubercular lesion	1 (0.5)	0	0	1 (0.45)
Total	193 (87.7)	17 (7.72)	9 (4)	220

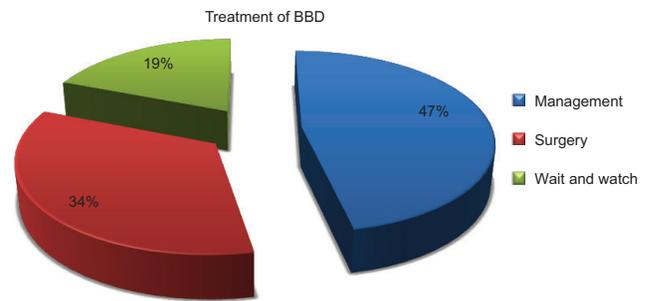
**Table 4. Study of nipple discharge in benign breast diseases (total number of patients 220)**

Nipple discharge	Frequency (%)
Present	17 (7.73)
Absent	203 (92.27)



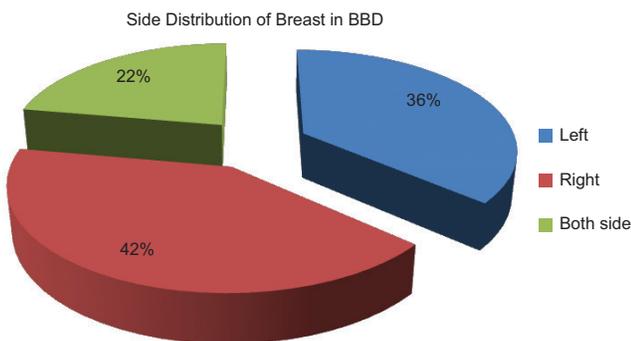
**Table 6. Treatment of benign breast diseases patients (total number of patients 220)**

Treatment	Frequency (%)
Management	103 (46.8)
Surgery	75 (34)
Wait and watch	42 (19)



**Table 5. Study of side distribution of breast in benign breast diseases (total number of patients 220)**

Side	Frequency (%)
Left	80 (36.3)
Right	90 (41.3)
Both side	49 (22.2)



lactating, total of 24 (10.9%) at cold abscess – 4 (2.06%) at menarche to menopause stage, cylindrical mastalgia – 7 (3.60%) at menarche to menopause stage – duct papilloma – 5 (2.57%) at menarche to menopause stage, 1 (11%) at postmenopausal, duct papilloma + fibroadenoma – 2 (1.03%) at menarche to menopause stage, fibroadenoma – 73 (37.8%) at menarche to menopause stage, and 3 (33.3%) at postmenopausal total 76 (34.5%). Fibroadenosis 14 (7.21%) was at menarche to menopause, galactocele – 2 (0.52%), 1 (0.26%) at lactating stage, mastalgia – 76 (39.4%) at menarche to menopause, 5 (5.5%) at postmenopausal, recurrent fibroadenoma – 2 (1.03%) at menarche to menopause, tubercular lesion, and 1 (0.51%) at menarche to menopause stage, [Table 3]. 17 (7.73%) had nipple discharge [Table 4]. 80 (36.3%) had left-sided, 90 (41.3%) had right, and 49 (22.2%) had both right and left-sided [Table 5], 103 (46.8%) were treated with medical management, 75 (34%) had surgery, and 42 (19%) were on wait and watch therapy [Table 6]. These findings were more or less in agreement with previous studies.<sup>[6,7]</sup>

postmenopausal [Table 2]. Breast abscess – 8 (4.12%) were at menarche to menopause age, 16 (88.8%) at

In the present study, more incidence of BBD was observed in age group between 20 and 30 followed by 31–40 years. These observations were also reported in many previous studies.<sup>[8,9]</sup> Hence, it can be hypothesized that variations in the levels of secretions of female hormones may lead to BBD. As BBDs were observed after puberty variations in the secretion of estrogen, progesterone, growth hormone of pituitary and corticosteroids, during lactation on prolactin, oxytocin for ejection of milk might have influenced various BBD such as mastalgia, fibroadenoma, fibroadenosis, and galactocele. It was also observed that majority of lactating mothers develop breast abscesses and nipple discharge.<sup>[10]</sup>

Moreover, the right-sided involvement is more than the left side breast benign diseases, but anatomically upper outer quadrant is most frequent site involvement due to bulk of mammary tissue.<sup>[11]</sup> It can be also hypothesized that due to the more movement of the right hand mostly by females generally, there will be more lymphatic flow which carries many pathological elements that may lead to more incidence of BBD in the right side rather the left side. Most of the BBD responded to conservative treatment who were followed up to 3–6 months who finally had favorable results.

It was also observed that the majority of woman belonged to low middle socioeconomic and underprivileged class; hence, nutritional cause for aggravating BBD could not be ignored.

## CONCLUSION

The present study of clinical spectrum and management of BBD at different ages of women will be useful to radiologist, physician, and surgeon because BBD had different modalities of treatment such as managed by conservative treatment, surgery, watch, and wait for 3–6 months. However, this study demands further pathophysiological, genetic, nutritional, hormonal, and immunological study because exact pathogenetic mechanisms of BBD are still uncertain.

This research paper was approved by the ethical committee of Deen Dayal Upadhyay Hospital, Delhi.

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