

Prospective Study of Benign Breast disease in Females of South Karnataka**Anant Kumar N**

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Conflict of interest: Nil

Abstract:**Background:** Benign breast diseases (BBD) consist of various groups of disorders, including developmental abnormalities, epithelial and stromal proliferation, inflammatory lesions, and neoplasms. It creates a phobic state of maligned tumours in adult females. Hence, histopathological analysis is mandatory.**Method:** 340 adults female aged between 20 to 60 years with BBD were studied. Routine blood examination, radiological investigation, USG/mammography, pathological investigation, and FNAC/HPE discharge were also carried out if necessary. Different supplies of BBDs were noted.**Results:** 42 (12.3) Breast abscesses, 9 (2.6%) cold abscesses, 11 (3.23%) cyclical mastalgia, 12 (3.52%) duct papilloma, 4 (1.17%) duct papilloma +fibroadema, 123 (36.11%) fibroadenoma, 25 (7.3%) fibroadenosis, 5 (1.47%) galactocele, 108 (31.7%) mastalgia, 4 (1.7%) recurrent fibroadenoma adenoma, 2 (0.5%) tubercular lesion.**Conclusion:** In the present pragmatic study, It is concluded that most of the BBD can be managed with medication, but in resistant cases, surgery is unavoidable, and in certain cases, the clinician has to wait and watch the outcome of treatment.**Keywords:** BBD=Benign Breast Diseases (BBD), menarche, menopause, malignancy, Mammography, histopathology

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Introduction

Benign breast diseases constitute a heterogeneous group of disorders, including developmental abnormalities, epithelial and stromal proliferation, inflammatory lesions, and neoplasms. It is the most common cause of breast problems in females and 10 times more common than breast cancer in western countries [1]. Benign breast diseases deserve attention because of their high prevalence, their impact on women's lives, and the phobic state of cancerous tumours [2,3]. Treatment of Benign Breast Disease (BBD) is the preservation of breast tissue as much as possible, in contrast to traumatising mutilating surgeries in cancers [4]. Hence, awareness about benign and malignant BBD must be communicated to patients by clinicians. Hence, histopathological studies play a vital role in the management of BBD. Therefore, an attempt was made to evaluate the various types of BBD in adult females.

Material and Method

340 adult females aged between 20 to 60 years regularly visiting the department of general surgery at the Sambram Institute of Medical Sciences and

Research Hospital, D. K. Halli, BEML Nagar, K.G.F., Karnataka-563115, were studied.

Inclusive Criteria

Females with benign breast diseases like breast lumps, breast pain, nipple discharge, itching around the nipple, or axillary swelling were selected for study. The patients gave their consent in writing.

Exclusion Criteria

Who had already undergone surgery and had breast cancer or immune compromised patients were excluded from the study.

Method

A detailed clinical examination and routine laboratory and radiological findings were carried out. All patients were taught "Breast self-examination" by the principle investigator along with trained nurses. Radiological examinations were USG or mammography, and pathological investigation was FNAC, HPE, or discharge smear (if necessary). The duration of the study was from September 2019 to April 2023.

Statistical Analysis

Various findings of benign breast diseases, age distribution, and management were classified by percentage. The statistical analysis was carried out using SPSS software.

Observation and Results

Table 1: Distribution of age Benign Breast disease (BBD) patients <20, 52 (15.2%) 12-30 year of age, 152 (46.4%), 90 (26.4%) in 31-40 year of age, 34 (10%) in 41-50 years, 6 (1.7%) in 51-60 years.

Table 2: Classification BBD according to menstrual age –308 (90.5%) menarche to menopause (excluding pregnancy and lactation), 20 (5.8%) lactating mothers, 12 (3.5%) post-menopausal.

Table 3: Study of different Nipple of BBD-Breastabscess – 14 (4.11%) menarches to menopause, 23 (6.76%) lactating

- cold abscess –9(2.6%) menarche to menopause, cyclical mastalgia– 11 (3.23%) in menarche to menopause and 4 (1.11%) in post-menopausal, 4 (1.7%) duct papilloma + Fibro adenoma
- Papilloma – 95 (27.9%) in menarche to menopause and 11 (3.23%) in post-menopausal,
- Fibro adenosis– 25 (7.35%) at menarche to menopause,
- Galactocele – 3 (0.88%) in menarche to menopause, 2(0.88%) in lactation
- Mastalgia –108 (31.7%) in menarche to menopause,
- Tubercular lesions 2 (0.5%) in menarche to menopause, 283 (83.2%) BBD in menarche to menopause, 25 (7.35%) in lactating mothers, 32 (9.41%) in postmenopausal women.

Table 4: (A) Study of side distribution and nipple discharge:

123 (36.1%) BBD were on left Breast

140 (41.1%) BBD were on right Breast

77 (22.6%) BBD were on both side of the breast

(B) Discharge was observed in 25 (7.35%) BBD and absent in 315 (92.6%)

Table 5: Treatment was – 115 (45.5%) management, 119 (35%) surgery, 66 (19.4%) were kept on wait and watch.

Discussion

The present perspective of BBD in females in south Karnataka The age distribution was 52 (15.2%) were ≤ 20 years, 158 (46.4%) were aged between 21-30 years, 90 (26.4%) were 31-40, 34 (10%) were 41-50 years, and 6 (1.7%) were 51-60 years (Table 1). 308 (90.5%) were menarche to menopause, 20 (5.8%) were lactating, and 12

(3.5%) were post-menopausal (Table 2). 42 (12.3%) had breast abscesses, 9 (2.6%) had cold abscesses, 11 (3.23%) had cylindrical myalgia, 2 (3.52%) had duct papilloma, 4 (1.17%) had duct papilloma + Fibroadenoma, 123 (36%) had fibroadenosis, 5 (1.47%) had galactocele, 108 (31.7%) had mastalgia, 21 (6.7%) recurrent adenoma, 2 (0.5%) tubercular lesion, i.e., 283 (83.2%) menarche to menopause, 25 (7.35%) lactating, and 32 (9.41%) post-menopausal (Table 3). 25 (7.35%) nipple discharges, 123 (36.1%) on the left nipple, 140 (41.1%) on the right nipple, and 77 (22.6%) on both nipples (Table 4). 155 (45.5%) were managed by drugs, 119 (35%), surgical interruption, and 66 (19.4%) were kept watch and wait (Table 5). These findings were more or less in agreement with previous studies [5,6,7]

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

Moreover, right sided involvement is greater than left-sided involvement in benign breast diseases, but anatomically, the upper outer quadrant is the most frequent site of involvement due to the bulk of mammary tissue [11]. It can also be hypothesised that, due to the more frequent movement of the right hand, mostly by females generally, there will be more lymphatic flow, which carries many pathological elements that may lead to a higher incidence of BBD on the right side rather than the left side. Most of the BBD patients responded to conservative treatments that were followed up to 3 to 6 months and finally had favourable results.

It is reported that, lymphocytic mastitis and the closely related entity of diabetic mastopathy are uncommon, benign breast diseases that are believed to be induced by auto-immune phenomena [12]. It is important to diagnose fat necrosis because it can often mimic carcinoma of the breast, though it is a rare (0.8%) phenomenon in breast tumours that show haemorrhage, and multinucleated giant cells microscopically [13]. It was also observed that the majority of women belonged to low- to middle-income and underprivileged classes; hence, nutritional causes for aggravating BBD could not be ignored.

Summary and Conclusion

The present study of the clinical spectrum and management of benign breast diseases at different ages in women will be useful to radiologists, physicians, and surgeons because BBD has different modalities of treatment, like conservative treatment, surgery, or watching and waiting for 3 to 6 months. But this study demands further pathophysiological, genetic, nutritional, hormonal, and immunological study because the exact pathogenesis mechanisms of benign breast diseases are still uncertain.

Limitation of Study

Due to the remote location of the research centre, the small number of patients, and the lack of the latest techniques, we have limited findings and results.

- This research paper was approved by the ethical committee of Sambram Institute of Medical Sciences and Research Hospital, D. K. Halli, BEML Nagar, K.G.F., Karnataka-563115.
- There is no conflict of interest.
- Self-funding

Table 1: Age Distribution in BB Disease patients

Age Distributions	Frequency	Percentage (%)
≤ 20	52	15.2
21-30	158	46.4
31-40	90	26.4
41-50	34	10
51-60	6	1.7

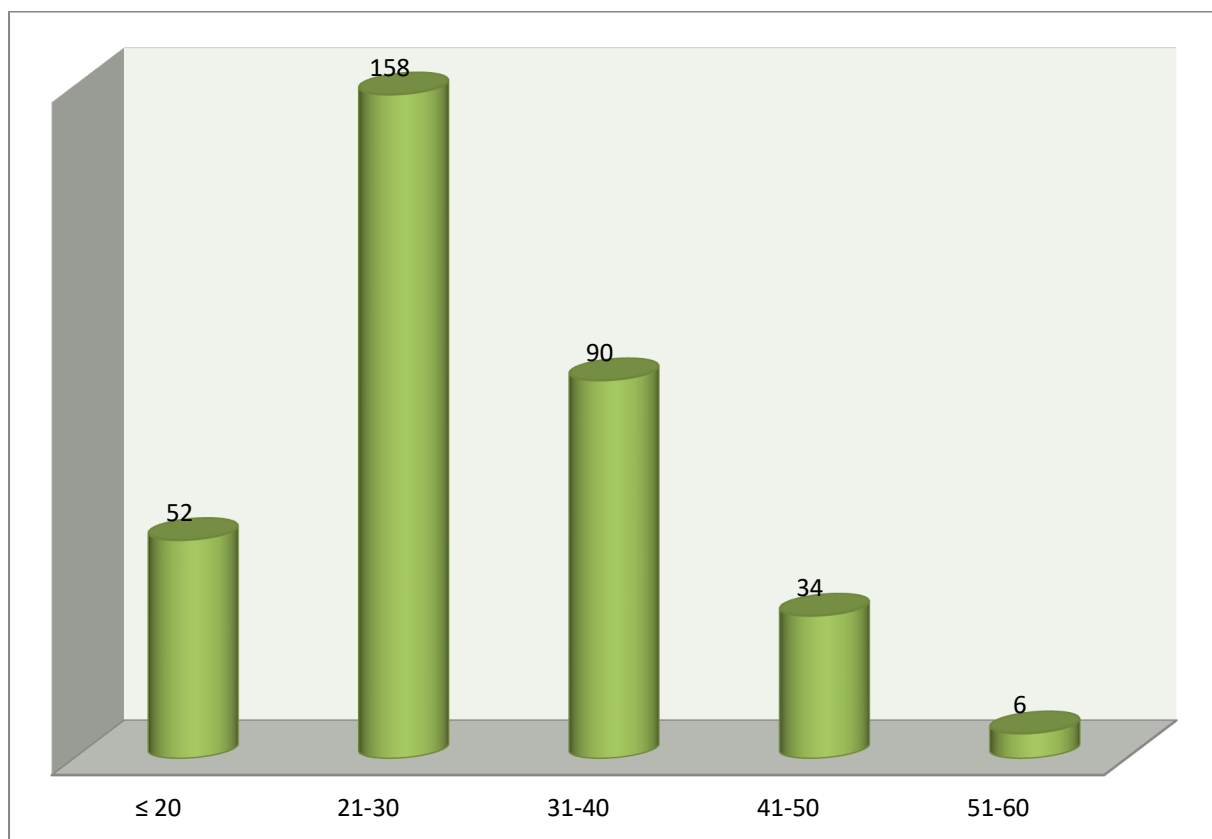


Figure 1: Age Distribution in BB Disease patients

Table 2: Classification of Benign Breast Diseases according to menstrual age

Age Group	Frequency	Percentage (%)
menarche to menopause age (excluding pregnancy and lactation)	308	90.5
Lactating	20	5.8
Post-Menopause	12	3.5

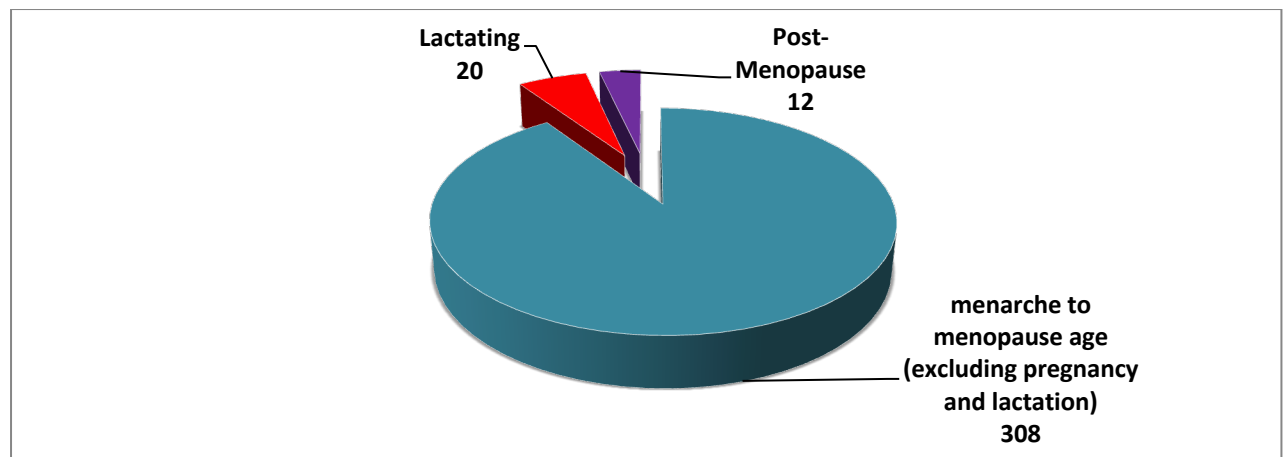


Figure 2: Classification of Benign Breast Diseases according to menstrual age

Table 3: Study of different type Benign Breast Disease (BBD) according to menstrual age

Type of BBD	Menarche to menopause age (excluding pregnancy and lactation)	Lactating	Post-Menopause	Total 340
Breast Abscess	14 (4.11%)	23 (6.76%)	0	42(12.3%)
Cold Abscess	9 (2.6%)	0	0	9 (2.6%)
Cyclical Mastalgia	11(3.23%)	0	0	11(3.23%)
Duct Papilloma	8 (2.35%)	0	4 (1.17%)	12 (3.52%)
Duct papilloma + Fibro adenoma	4 (1.17%)	0	0	4 (1.17%)
Fibro adenoma	95 (37.9%)	0	11 (3.23%)	12.3(36.1%)
Fibro adenoma	25 (7.33%)	0	0	25 (7.31%)
Galactocele	3 (0.88%)	2 (0.58%)	0	5 (1.47%)
Mastalgia	108 (31.7%)	0	0	108 (39.1%)
Recurrent fibroadenoma	4 (1.17%)	0	17 (5%)	21(6.17%)
Tubercular lesion	2 (0.5%)	0	0	2 (0.5%)
Total	283 (83.2%)	25 (7.35%)	3 (9.11%)	340 (99.90%)

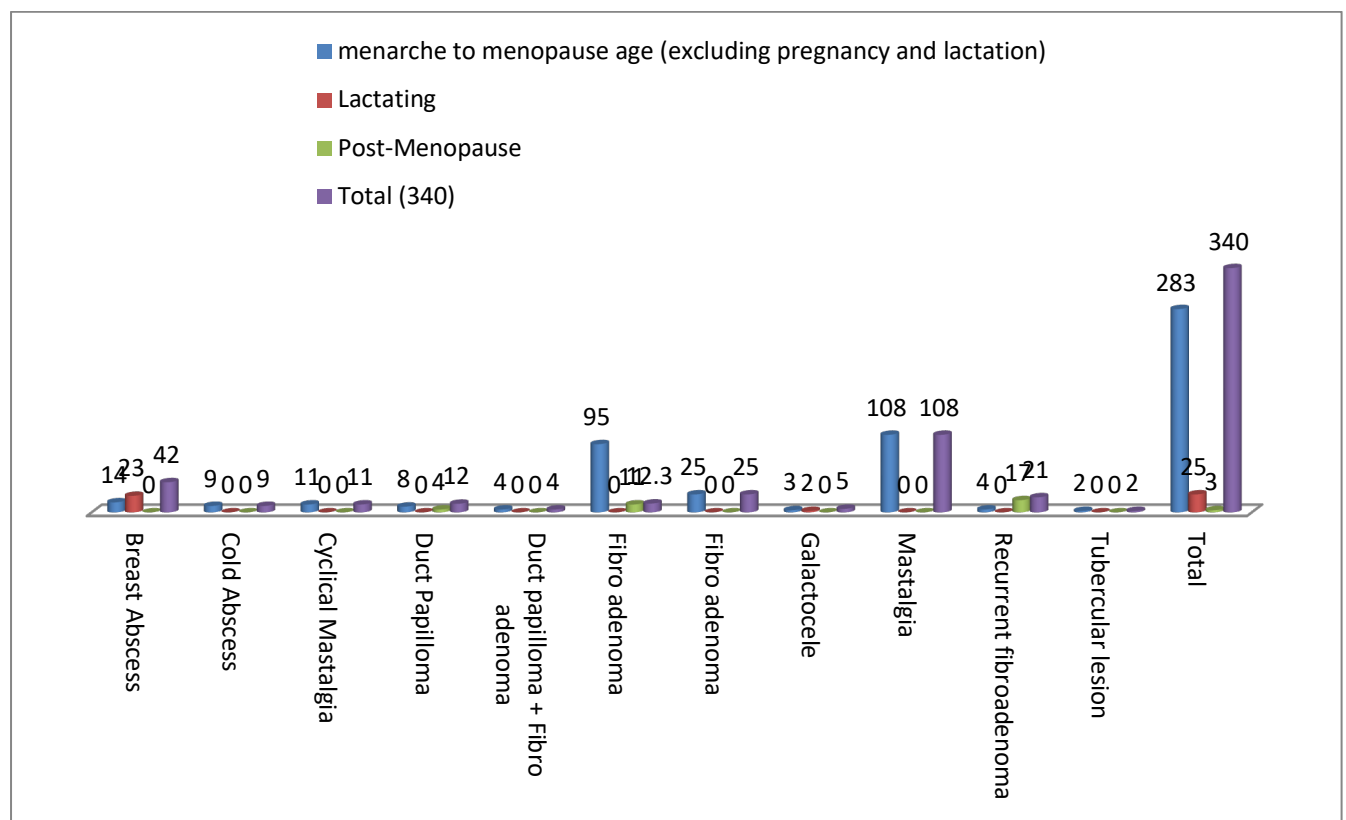


Figure 3: Study of different type Benign Breast Disease (BBD) according to menstrual age

Table 4: Study of A distribution of Breast in BD and Nipple discharge

a) Side distribution of BBD

Side	Incidence	Percentage (%)
Left	123	36.1
Right	140	41.1
Both side	77	22.6



Figure 4: Study of A distribution of Breast in BD and Nipple discharge (a) Side distribution of BBD

b) Study of Nipple discharge

Nipple discharge	Incidence	Percentage (%)
Present	25	7.35
Absent	31.5	92.6

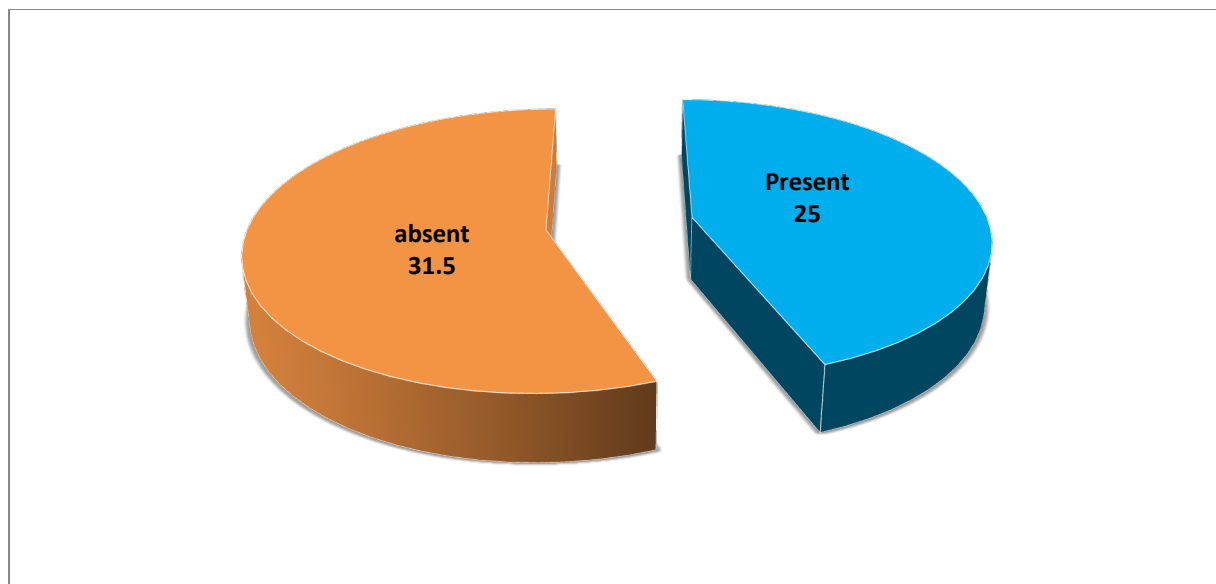


Figure 5: Study of A distribution of Breast in BD and Nipple discharge (b) Study of Nipple discharge

Table 6: Treatment of BBD patients

Treatment	Incidence	Percentage (%)
Management	155	45.5
Surgery	119	35
Wait and watch	66	19.4

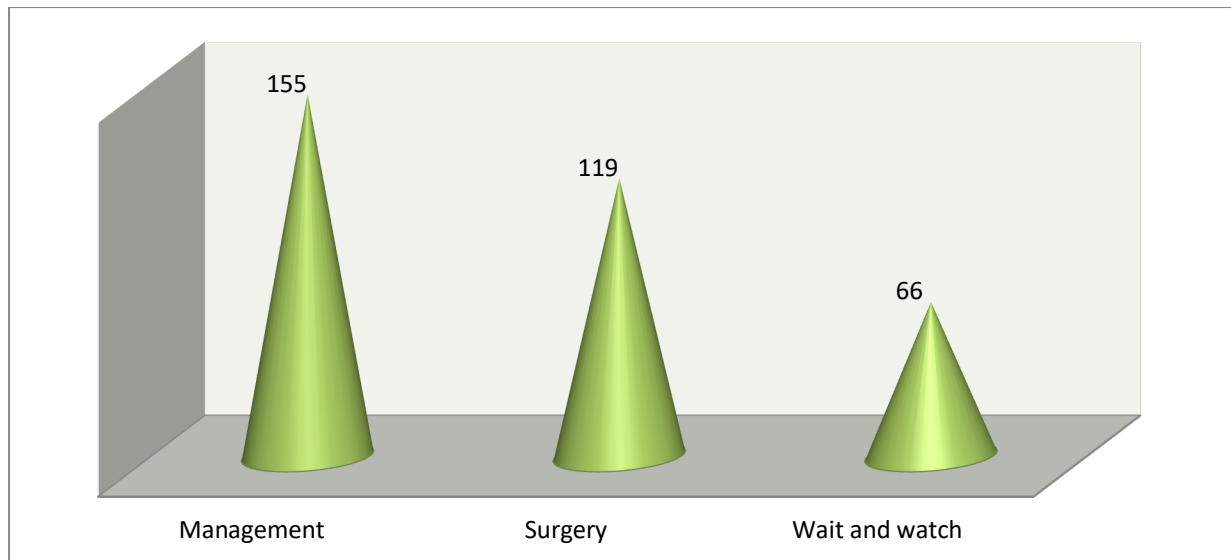


Figure 6: Treatment of BBD patients

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