e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2023; 15(11); 865-870

Original Research Article

Prospective Study of Benign Breast Disease in South Karnataka Population

Prashanth C

Assistant Professor, Department of General Surgery, Sri Siddarth Institute of Medical Sciences and Research Centre T. Begur. Nelamangala, Bangalore Rural, Karnataka-562123

Received: 11-09-2023 / Revised: 17-10-2023 / Accepted: 22-11-2023
Corresponding Author: Dr. Prashant C
Conflict of interest: Nil

Abstract

Background: Benign breast diseases (BBD) can occur at any age during the life span of a female. The breast is a dynamic organ that undergoes cyclic changes throughout a woman's reproductive life.

Method: 50 (fifty) female adults aged between 20 to 60 years with BBD were studied. Routine blood examinations, radiological investigations (USG/mammography), and pathological investigations (FNAC/HPE discharges) were also carried out if necessary.

Results: 44 (88%) breast abscesses were observed from menarche to menopause, 4 (8%) in lactating mothers, 2 (4%) in post-menopausal women, 5 (10%) breast abscesses, 1 (2%) cold abscesses, and 2 (4%) cystic mastalgia. 16 (32%) fibro-adenomas, 3 (6%) fibro-adenosis, 12 (24%) mastaliga, and 1 (2%) tubercular lesion were observed.

Conclusion: It is concluded that BBD can be managed with medication, and in resistant cases, surgery intervention is required. In certain cases, the clinician has to wait and watch the prognosis of BBD.

Key words: benign breast diseases (BBD), menopause, non-malignant, lactation, HPE (histopathological evaluation)

Introduction

The breasts are specialised organs. Hormones and growth factors acting on the epithelial and stromal elements right from the onset of puberty until menopause cause significant morphological changes leading to aberration in normal development and involution (ANDI), inflicting the majority of benign breast diseases (BBD) [1].

The female breast is more developed than the male breast, as their primary function is to produce milk for vitamins for the little one and child. Female hormones, including oestrogen and progesterone, are essential in promoting growth and changes that arise inside the breast, especially for the duration of pregnancy and the menstrual cycle [2]. The physiological changes in the breast occur during menstruation, pregnancy, lactation, and menopause. The BBD includes a heterogeneous group of lesions and may present with a wide range of symptoms. The vast majority of the lesions that occur in the breast are benign. The classification of BBD encompasses both pathogenicity and the degree of abnormality. It is a bidirectional framework based on the fact that most benign breast diseases arise from normal physiological processes. Most BBDs can be regarded as minor aberrations of normality. Hence, an attempt was made to evaluate the types of BBD in different age groups of females.

Material and Method

50 (fifty) adult females visited regularly surgery department of Siddarth Medical Sciences and Research Centre T. Begur. Nelamangala, Bangalore Rural, Karnataka-562123 were studied.

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

Exclusion criteria: patients 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 October 2021 to October 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: Age distribution of benign breast disease (BBD) patients <20 were 7 (14%) patients, 23 (46%) were 12–30 years of age, 13 (26%) were 31–40 years of age, 5 (10%) were aged between 41–50 years, and 26 (4%) were 51–60 years old.

Table 1: Age Distribution in Benign Breast Disease patients

Age Distributions	Frequency	Percentage (%)
< 20	7	14
21-30	23	46
31-40	13	26
41-50	5	10
51-60	2	4

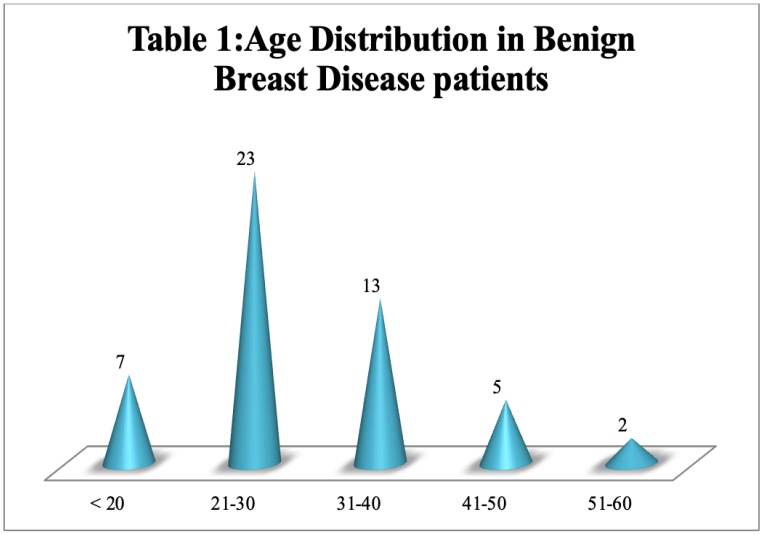


Table 2: Classification of Benign Breast Disease according to Menstrual Age: 45 (90%) menarche to menopause (excluding pregnancy and lactation), 3 (6%) lactating mothers, and 2 (4%) post-menopausal.

Table 2 Classification of Benign Breast Diseases according to menstrual age

Age Group	Frequency	Percentage (%)
menarche to menopause age (excluding pregnancy and lactation)	44	88
Lactating	4	8
Post-Menopause	2	4

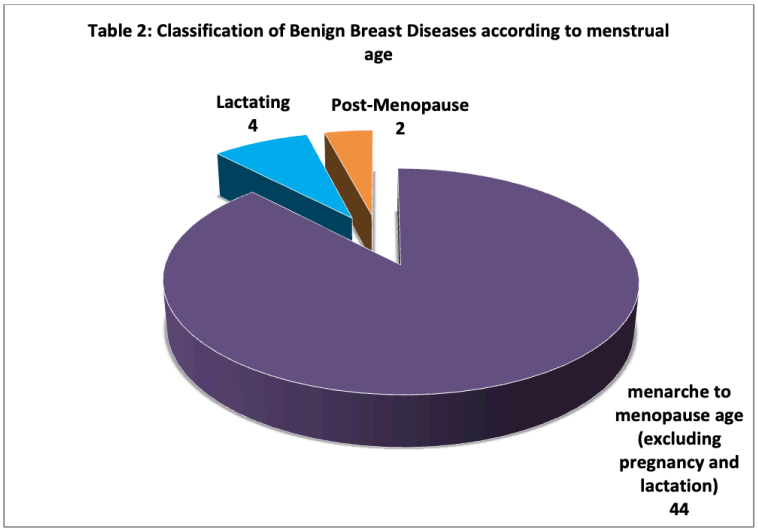


Table 3: Study of different types of BBD 2 (4%) breast abscesses, 3 (6%) lactating, 1 (2%) cold abscess, 2 (4%) cystic mastalgia, Duct papilloma, 1 (2%) in menarche to menopause, 1 (2%) postmenopausal, 1 (2%) Fibro adenoma, 1 (2%) duct papilloma + Fibro adenoma, 16 (32%) in menarche to menopause, 2 (4%) post-menopausal, 3 (6%) Fibro adenosis, Galactocele 1 (2%) in menarche to menopause, 1 (2%) lactation, 12 (24%) Mastalgia, recurrent fibroadenoma, 1 (2%) in menarche to menopause, 2 (4%) postmenopausal, 1 (2%) tubercular lesion, 41 (82%) menarche to menopause (excluding pregnancy and lactation), 4 (8%) lactating, and 2 (4%) postmenopausal.

Table-3 Study of different type Benign Breast Disease (BBD)

Type of BBD	menarche to menopause age (excluding pregnancy and lactation)	Lactating	Post-Meno-pause	Total 50
Breast Abscess	2 (4%)	3 (6%)	0	5(10%)
Cold Abscess	1 (2%)	0	0	1 (2%)
Cyclical Mastalgia	2 (4%)	0	0	2(4%)
Duct Papilloma	1 (2%)	0	0	1 (2%)
Duct papilloma + Fibro adenoma	1 (2%)	0	0	1 (2%)
Fibro adenoma	16 (32%)	0	1 (2%)	17 (34%)
Fibro adenoma	3 (6%)	0	0	3 (6%)
Galactocele	1 (2%)	1 (4%)	0	2 (4%)
Mastalgia	12 (24%)	0	0	12 (24%)
Recurrent fibroadenoma	1 (2%)	0	1 (2%)	2 (4%)
Tubercular lesion	1 (2%)	0	0	1 (2%)
Total	44 (88%)	4 (8%)	2 (4%)	50 (100%)

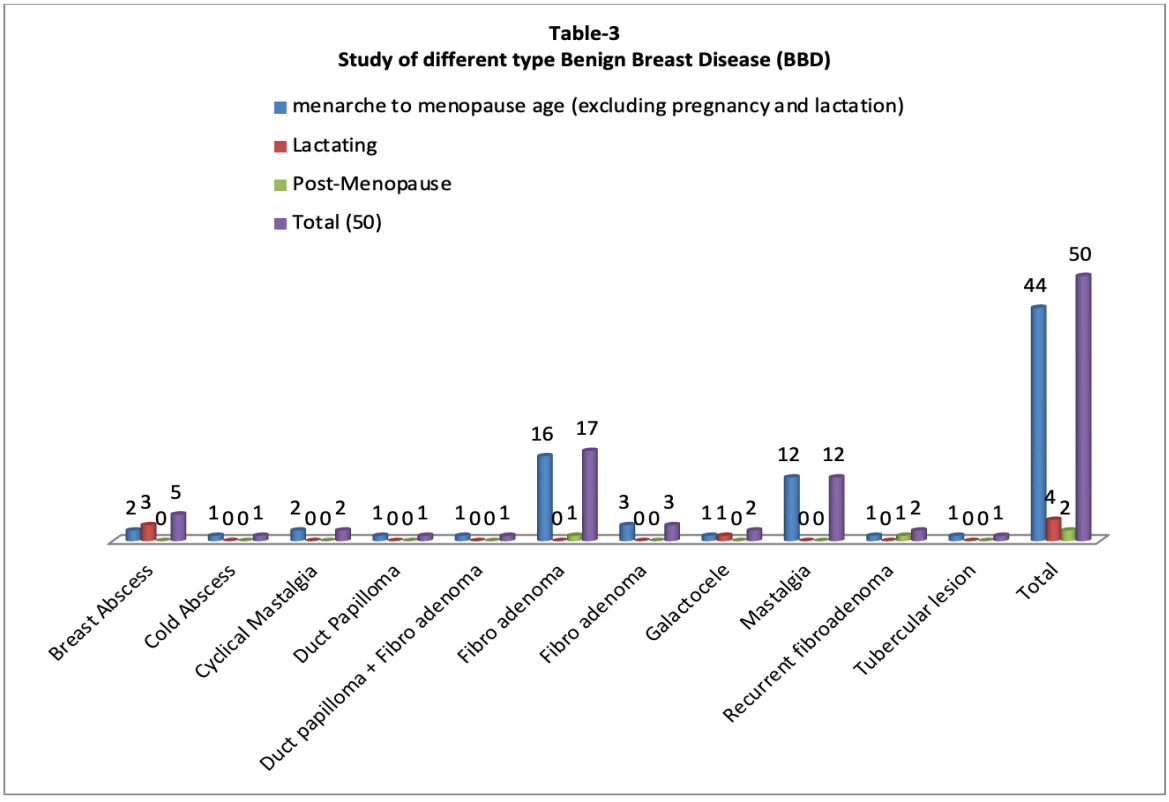


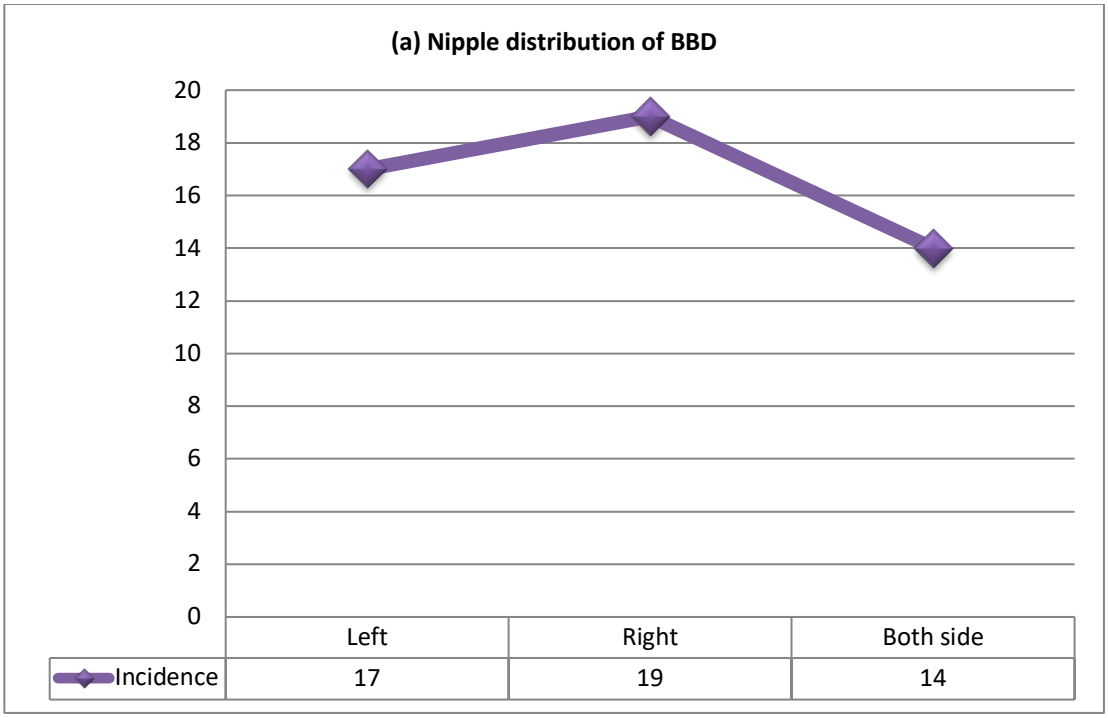
Table 4: Study of distribution Breast benign disease and nipple discharge

- Nipple distribution of BBD: 17 (34%) left breast, 19 (38%) right breast, and 14 (28%) both breast.
- Study of Nipple Discharge 4 (8%) patients had discharged nipples, and 46 (92%) were absent.
- Treatment of BBD patients: 23 (46%) patients were managed with conservative treatment, 17 (34%) patients underwent surgery, and 10 (20%) kept watch and waited.

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

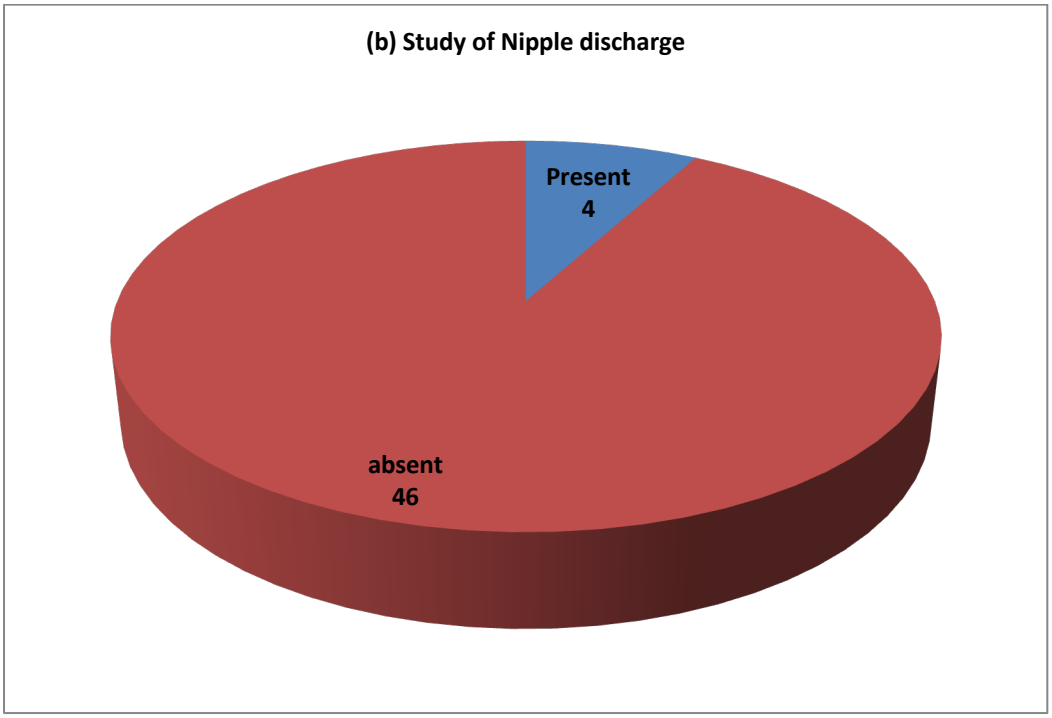
a) Nipple distribution of BBD

Side of Breast	Incidence	Percentage (%)
Left	17	34
Right	19	38
Both side	14	28



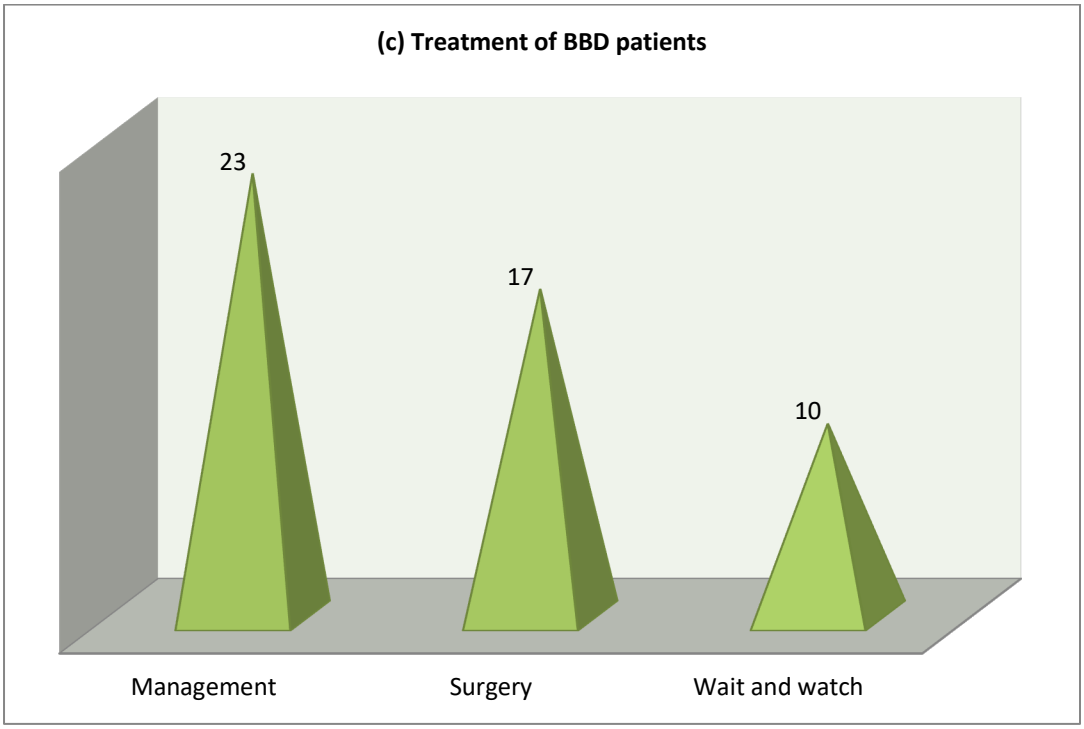
b) Study of Nipple discharge

Nipple discharge	Incidence	Percentage (%)
Present	4	8
absent	46	92



c) Treatment of BBD patients

Treatment	Incidence	Percentage (%)
Management	23	46
Surgery	17	34
Wait and watch	10	20



Discussion

Present study of BBD in the South Karnataka population. The distribution of age was 7 (14%) were < 20 years, 23 (46%) were 21–30 years of age, 13 (26%) were 31–40 years, 5 (10%) were 41–50 years, and 2 (4%) were 51–60 years of age (Table 1). In the classification of BBD according to menstrual age, 44 (88%) were menarche to menopause (excluding pregnancy and lactation), 4 (8%) were lactating mothers, and 2 (4%) were post-menopausal (Table 2). In the study of different types of BBD Breast abscess: 2 (4%) in menarche to menopause, 3 (6%) in lactation, 1 (2%) cold abscess, 2 (4%) cyclic mastalgia, 1 (2%) duct papilloma, 1 (2%) due papilloma+fibroadenoma, 3 (6%) fibroadenosis, 12 (24%) mastalgia, and 1 (2%) tubercular lesion. Fibro-adenoma: 16 (32%) were menarche-to-menopausal women, 1 (2%) in lactation. Galactocele, 1 (2%) in menarche to menopause, 1 (2%) in lactation, Recurrent fibroadenoma: 1 (2%) in menarche to menopause, 1 (2%) in post-menopausal (Table 3). Nipple distribution was on the right, 17 (28%) on both, 4 (8%) were discharging, 23 (46%) were managed with drug treatment, 17 (34%) underwent surgery, and 10 (20%) watched and waited (Table 4). These findings were more or less in agreement with previous studies [3-7].

In the present study, a higher incidence of BBD was observed in the age group between 20-30 years 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, fibro-adenoma, fibro-adenosis, 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 for 3–6 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 patho-physiological, genetic, nutritional, hormonal, and immunological study because the exact pathogenesis mechanisms of benign breast diseases are still unclear.

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 Siddarth Medical Sciences and Research Centre T. Begur Nelamangala, Bangalore Rural, Karnataka-562123.
- There is no conflict of interest.
- Self Funding

References

1. Oluwole F, Soji- Analysis of Breast Lesions in Blacks, Am. J. Surg., 1979, 137(9), 786–89.
2. E, Skandalakis, Panajotis N- Surgical Anatomy and Technique, 2nd Edition, 2007-99-102
3. Valdez R, Thorson J – Mastitis and Diabetic Myopathy, Med. Pathol. 2003, 16 (3); 223–8.
4. Kerridge WD, Kryvenko ON – Fat Necrosis of the Breast; Radiological Research and Practice 2015, 613-619.
5. Hagensen CD- Diseases of the Breast, Br. J. Surg. 1986, 129 (17); 673-682.
6. Umanath I N, Akhiwu. W- Breast tumours of adolescents in the African Population Afr. J Paed. Surg. 2010, 7(2):78–80
7. Malik MAN, Salauddin o-Breast diseases spectrum in wah cantt. POF Hospital experience professor. Med. J. 2010, 17(3), 366-372
8. De Chelnovky Tibor, "Benign Tumours of the Breast," Arch. Surg. 1937, 38(9), 88–92
9. Harris R, Kinsinger L S- Routinely teaching breast self-estimation is dead; what does it mean? J. Natl. Cancer Inst. 2002, 94(19), 420–2.
10. Decker GAG, Duphesis, D.J.-M. McGregor's Synopsis of Surgical Anatomy, 12th Edition K.M. Varghese 1990, 161–71
11. The anatomical basis of clinical practice, 4th edition, Elsevier Living Stone, 1998.
12. Naveen N. Mulherjee, Mahajan A, - A clinical study of benign breast diseases in rural populations J. Evolution. Med. Dent. Sc. 2013, 2(30): 5,499–512
13. S- Breast pain, engorgement, nipple pain, and mastitis. Clin. Obstet Gynecol. 2004 Sep. 47 (3), 676–82