THE CURRENT SCENARIO OF BENIGN BREAST DISEASES IN RURAL INDIA. A CLINICOPATHOLOGICAL STUDY

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ABSTRACT: OBJECTIVE: To determine the frequencies of various benign breast diseases (BBD) in female patients in Rural India. **METHODOLOGY:** This is a prospective cohort study of all female patients visiting the surgical clinic with breast problems. This study was conducted at SGT Medical College, Budhera (Gurgaon) India, over a period of about three years starting from March 2010 to February 2013. All female patients visiting the surgical department with breast problems were included in the study. Patients with obvious clinical features of malignancy or those who on work up were diagnosed as carcinoma were excluded from the study. **RESULTS:** A total of 225 patients were included in the study. About 50.22% (113/225) patients belonged to 3rd decade of life (age between: 21-30 years) followed by 25.77% from 4th decade (age between: 31 – 40 years). Fibroadenoma was the most common benign breast disease, seen in 29.77% (67/225) of patients, followed by fibrocystic disease seen in about 25.77% (58/225) patients. **CONCLUSION:** Benign Breast Diseases (BBD) are common problems in females of reproductive age. Fibroadenoma is the commonest of all benign breast disease in our set up mostly seen in 2nd and 3rd decade of life. Fibrocystic disease of the breast is the next common BBD whose incidence increases with increasing age.

KEY WORDS: Benign breast disease, Fibroadenoma, Fibrocystic diseases, Rural India.

INTRODUCTION: The term "benign breast diseases" (BBD) encompasses a heterogeneous group of lesions, that may present a wide range of symptoms or may be detected as incidental microscopic finding¹. BBD includes all nonmalignant conditions of the breast, including benign tumours, trauma, mastalgia, mastitis and nipple discharge. Benign tumours include pathologic changes that do not increase a patient's risk for developing cancer, lesions that confer a slightly increase risk and lesions that are associated with up to 50% risk of developing breast cancer². BBD can present with a palpable mass, pain and nipple discharge or nipple inversion. The issue of BBD is a relatively neglected aspect of breast diseases and has received step motherly treatment as compared to the malignant lesions of the breast. This is despite the fact that vast majority of the lesions that occur in the breast are benign and it has been reported that benign lesions of the breasts are far more frequent than the malignant ones ^{1,3}. It has also been reported that at least 90% of the patients visiting breast clinics will have non-malignant disorders^{4,5}. The current study was taken up to determine the scenario of BBD in female patients, in a teaching hospital situated in the rural India.

METHODOLOGY: This was a prospective cohort study carried out at over a period of about three years starting from March 2010 to February 2013. All female patients visiting the surgical department with complaints pertaining to breast were included in the study. Patients with obvious clinical features of malignancy or those who on work up were diagnosed as carcinoma were excluded form the study. Detailed histories of patients were recorded that included age, marital status,

parity, age of menarche, age at first pregnancy and age at menopause. Patients aged 50 years or above and having no menses for at least two years at the time of presentation were considered to be postmenopausal. Family history of breast diseases especially breast cancer, history of contraception used was recorded. Detailed examination of lump and axilla was made with especial attention to any clinical signs of malignancy. Ultrasonography or mammograms were done when required necessary. Fine needle aspiration cytology (FNAC) was performed in patients with lumps to confirm the diagnosis. Incisional or excision biopsy was done in patients with inconclusive FNAC report. Data was entered on pre-designed proforma and frequencies of various BBD in different age groups were calculated.

RESULTS: A total of 225 patients were included in the study during the three years from March 2010 to February 2013. About 50.22% (113/225) patients belonged to 3rd decade of life (age between: 21-30 years) followed by 27.55% from 4th decade (age between: 31 – 40 years), 22.22% from 2nd decade (age between: 11 – 20 years) of lives and 2.66% from the 5th decade (age between: 41 – 50 years). Fibroadenoma was the most common benign breast disease seen in 29.77% (67/225) of patients, followed by fibrocystic disease seen in about 25.77% (58/225) patients. Breast abscess was seen in 21.33% (48/225) patients, duct ectasia in 4.44% (10/225) and mastalgia in 10.22% (23/225) patients. Other benign diseases noted were duct papilloma in 3.55% (8/225), galactocele in 1.33% (3/225), and tubercular mastitis was seen in 1.77% (4/225) of patients. About 52.33% patients with fibroadenoma belonged to 3rd decade of life followed by 26.86% from 2nd decade of life and 20.89% belonged to 4th decade of life. About 44.82% of patients with fibrocystic disease were from 3rd decade, 31.03% from 2nd decade and 17.24% from 4th decade. Breast abscess was commonly seen in patients (52.08%) of 3rd decade and in 30.43% patients of 4th decade. About 50% of patients with duct ectasia were seen from 3rd decade followed by 30% from 4th decade and 20% from the 5th decade of life. About 56.52% of cases of mastalgia were from 3rd decade of life followed by 30.43% from 4th decade and 13.04% 2nd decade of life. Galactocele which accounted for 1.33% (3/225) of all BBD was seen in 66.66% of patients in 3rd decade and 33.33% in 4th of life. Duct papilloma was seen in 62.50% in 4th decade and 37.50% in 3rd of life respectively. Tubercular mastitis was more commonly seen (50%, 2/4) in 3rd decade of life. A detailed account of these BBD according to the various age group is shown in Table-I.

DISCUSSION: Breast is a dynamic structure and undergoes various stages of physiological changes, i.e. development, cyclic changes, pregnancy, lactation and involution. These physiological changes create a concept of aberration of normal development and involution (ANDI). This does not mean that BBD does not occur, but that the term should be reserved for disorders of such severity that they are frankly abnormal.

In our study about 97.32% of the patients with BBD were in the age group between 11-40 years with peak incidence (58.22%) in age group between 21-30 years. These results are consistent with the study of Out AA ⁶ in which majority of the patients were below the age of 30 years. Ihekweba in his study from Western Africa showed that about 80.5% of the BBD occur in females between 16-35 years of age ⁷. Chaudhary et al found almost equal incidence of BBD in patients between age group of 21 - 30 & 31 - 40 years ⁸. However Dunn et al, contradicts the results of all above mentioned studies in which the mean age of the patient with BBD was 50 years ⁹.

In our study fibroadenoma was the most common BBD seen in 67 of patients. Fibroadenoma was most commonly seen (52.33%) in patients with 3rd decade (21 - 30 years) of life and 26.86% in patients with 2nd decade (11 - 20 years) of life. Murilllo et al also found 38% incidence of fibroadenoma in a study of about 698 patients with BBD ⁴. No significant difference was noted in the recent literature regarding the age groups having fibroadenoma ⁸. This is because of its presentation as freely mobile discrete lump in the breast of young females and more awareness among females due to electronic media and education.

Fibrocystic disease was the second most common (25.77%) BBD seen in our study. The vast majority of the patients (44.82%) with fibrocystic disease were from 3rd decade followed by 31.03% from 2nd decade of life, 17.24% from 4th decade and 6.89% from 5th decade of life. Stern et al¹⁰ found fibrocystic disease as the most common in females of all ages especially in the middle age group. Chaudhary et al⁸ in his study of 234 patients, found fibrocystic disease as the most common BBD with maximum age incident in the 5th decade of life while Kamal et al found about 65% of patients with fibrocystic disease of breast were from 31–50 years of age where as peak incidence (36%) was between 31-40 years¹¹. The difference between the age group in patients with fibrocystic disease differs geographically. The possible reasons being social accustom, age of menarche and parity, and breast feeding procedures, use of contraceptive pills and self awareness. Because of low literacy rate among females and more rural areas, the female affected with fibrocystic disease tend only to see surgeon when the symptoms are alarming.

Although many other names have been used to describe this entity over the years including (fibrocystic disease, Cystic mastopathy, chronic cystic disease, mazoplasia, Reclus's disease) ^{12,13}. The term "fibrocystic changes" is now preferred since in upto 50 to 60 percent of women without disease, this histological pattern may be evident¹⁴.

Breast abscess was seen in 21.33% of the patients in our study with peak incidence (52.08%) in patients from 3rd decade of life. This was most commonly observed in lactating females during the first three months after delivery. Barton et al found acute bacterial mastitis common at any age but most frequently in lactating breasts¹⁵.

Mammary duct ectasia, also called periductal mastitis is a distinctive clinical entity that can mimic invasive carcinoma clinically¹. In our study, 4.4% of the patients had duct ectasia with 50% in 3rd decade, 30% in 4th decade and 20% in 5th decade of life. Duct ectasia is commonly seen in the 30 - 50 years age groups in Western population and more than 40% have substantial duct dilatation by the age of 70 years³. It usually presents with nipple discharge, a palpable subareolar mass, pain, nipple inversion (Slit like) or nipple retraction. Smoking has been implicated as an etiological factor in mammary duct ectasia^{16,17}. Significantly 60% of patients with duct ectasia gave history of moderate smoking in our study, it requires further evaluation.

Mastalgia was seen in 20.22% of patients in our study. Twenty five percent of the referral to breast clinics in West is due to mastalgia and it affects up to 70% women at some times during their lives ⁸. All the patients with mastalgia in our study were from 11 - 40 years of age group, highest being from 3rd decade. However this was more common in the 4th and 5th decade of lives in western women. Duct papilloma was seen in 3.55% (8/225) of the patients in our study, belonged to 2nd and 3rd decade of life. The commonest presentation being nipple discharge. In our study 1.33% (3/225) had galactoceles, the belonged to 3rd and 4th decade of life. Fat necrosis 0.88% (2/225) belonged to 2nd and 3rd decade while lipoma 0.88% (2/225) was from 3rd and 4th decade of life.

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Granulomatous mastitis resulting from infectious etiology, foreign material or systemic autoimmune disease can involve breast ¹. In our study, 4 patients (1.77%) had tubercular mastitis. Though rare in Western world but the fact that traveling from one place to another in the global world has been increasing and that the prognosis for complete cure with appropriate antitubercular therapy is excellent. The overall incidence is less than 0.1% of all breast lesions in developed countries and 3-4% in developing countries¹⁸.

CONCLUSION: BBD are common problems in females of reproductive age. The common symptoms for which women consult or are referred to hospital, have palpable lump, breast pain and nipple discharge. Fibroadenoma is the commonest of all benign breast disease in our set up mostly seen in 2nd and 3rd decade of life. Fibrocystic disease of the breast is the next common BBD whose incidence increases with increasing age.

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Table-I Distribution of benign breast diseases in various age groups

Sl. No	Disease	Age (in years)				Total
		1-20	21-30	31-40	41-50	
1	Fibroadenoma	18	35	14	-	67
2	Fibrocystic disease	18	26	10	4	58
3	Mastalgia	3	13	7	-	23
4	Duct Papilloma	-	3	5	-	8
5	Galactocele	-	2	1	-	3
6	Duct ectasia	-	5	3	2	10
7	Breast abscess	7	25	16	-	48
8	Fat necrosis	1	1	-	-	2
9	Tubercular mastitis	1	2	1	-	4
10	Lipoma	-	1	1	-	2
	Total	48	113	58	6	225

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