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SPECTRUM OF BENIGN BREAST DISEASE AT RURAL TEACHING HOSPITAL OF CENTRAL INDIA: A CROSS SECTIONAL STUDY

***Swapnil Murlidhar Wahane¹, Bharati Pandya² and Ravinder Narang²**

¹DNB Rural Surgery (Registrar), Bhandara, Maharashtra

²Department of General Surgery, Mahatma Gandhi Institute of Medical Sciences, Sevagram, Wardha, Maharashtra

**Author for Correspondence*

ABSTRACT

The previous epidemiological studies were based on histopathological evaluation, thus concentrated on fibroadenoma and fibrocystic disease neglecting fibroadenosis and breast pain which has significant contribution in benign breast disease. The aim of the study is epidemiology of benign breast diseases in a rural hospital. The present cross-sectional study was carried out in a rural medical college & hospital during the period 1st January 2013 to 30th June 2014 in the 45367 new patients who attended the surgery outdoor patient department during this period among 518810 outdoor patients of all departments in hospital. A detailed clinical history and physical examination was carried out in all the females (1236) with benign breast diseases and finding were recorded in a standard proforma. Among a total of 1236 with benign breast diseases, fibroadenoma was the most common lesion constituting 842 (68.12%) cases. Fibroadenosis (presently termed fibrocystic disease) was the second most common lesion constituting 251 (20.30%) of all cases. Benign breast diseases are commonly seen in younger age group and usually presented with either breast lumps or nodularity, breast pain and nipple discharge of long duration.

Keywords: *Benign Breast Diseases, Fibroadenoma, Fibroadenosis, Rural Hospital*

INTRODUCTION

Cultural inhibition prevents many Indian women from articulating a breast related problem. This deep-seated taboo exerts a pernicious effect by making the average rural Indian woman unaware of the breast pathologies and the changes occurring therein, whether these are normal or abnormal. On the other hand, cancer phobia drives urban rich to seek the services of medical and surgical oncologists even for benign problems.

The Florance statement issued at the first European Breast Cancer Conference in October 1998, by the European Organization for the Research and Treatment of Cancer – Breast Cancer Cooperative Group (EORTC-BCCG), the European Society Of Mastology (EUSOMA) and Europa Donna and the subsequent approval given by the European parliament ensuring access to multidisciplinary breast clinics for all European women and mandatory quality assurance programmes for breast services remains a distant dream in India.

In India, as also in many other countries of the world, the management of this vast and complex spectrum of problem may range from the nihilistic to the meddlesome. On the one hand patients are brushed aside, since a non cancerous condition is deemed unworthy of attention. On the other hand, some patients are viewed through the distorting prism of breast cancer with a gross inflation of their individual risk for future breast cancer.

It is difficult to estimate the prevalence and incidence of benign breast lesions in general, because small proportion of women with benign breast disease (BBD) come to clinical attention and proceed to biopsy. Sadly most of the previous epidemiological studies were based on histopathological evaluation, thus concentrated on fibroadenoma and fibrocystic disease neglecting fibroadenosis and breast pain which has significant contribution in benign breast disease.

On this background the present study was undertaken to analyze pattern and estimate the epidemiological burden of benign breast diseases in a rural hospital.

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MATERIALS AND METHODS

The present cross-sectional study was carried out in a rural medical college & hospital during the period 1st January 2013 to 30th June 2014 in the 45367 new patients who attended the surgery outdoor patient department during this period among 518810 outdoor patients of all department in hospital. Among the 1589 patient, 1314 patients had benign breast disease and were included in the study. Rest 275 with malignant disease were excluded from the study

A detailed clinical history and physical examination was carried out in all the females (198) with benign breast diseases and finding were recorded in a standard proforma. This included: General information, Presenting Complaints (Side of the involved breast. History of pain – Site, Character, Relationship with menstrual cycle.

History of lump:- Number and site of lumps, Onset and progression, Association with pain and discharge, Premenstrual aggravation of lump. History of discharge:- Site, Type of discharge. Related complaints- Trauma, fever). Past history of benign breast disease and breast surgery if any. Recent / Past use of oral contraceptives, Marital status. Family history of breast diseases. Clinical diagnosis was recorded.

Investigations were carried out which included-

Baseline Investigations - Complete haemogram
 Urine – Albumin and sugar

Cytological examination - Fine Needle Aspiration Cytology (FNAC) of breast lump.

Patients were operated wherever indicated, and the tissue material was submitted for histopathology and reports were recorded.

Statistical Analysis

Data was analyzed using statistical software SPSS 17.0 version and Graph Pad Prism 5.0 version and $p < 0.05$ is considered as level of significance ($p < 0.05$).

RESULTS AND DISCUSSION

Results

A detailed history was recorded and clinical examination was carried out. Patients were investigated with FNAC and histopathology wherever required.

Table 1: Sex distribution of new patients attending surgery OPD

Sex of patient	Number	Percentage
Male	27674	61%
Female	17693	39%
Total	45367	100%

Among the total 45367 patients who attended the surgical outdoor patients department, 27674 (61 %) were males and 17693 (39 %) were females.

Table: 2 Workload of breast disease in a Surgery OPD

Incidence in hospital setup	Number (N = 45367)	Percentage (%)
Breast disease	1589	3.5%
Benign breast disease	1314	2.9%
Malignant disease	275	0.6%

A total of 45367 new patients attended the surgical outdoor patient department, out of which 1589 patients had breast disease. 1314 had benign breast disease and 275 had malignant breast disease. Thus, hospital incidence of benign breast disease was calculated as 2.9% and that of malignant breast disease was calculated as 0.6%. The benign to malignant ratio was calculated as 5: 1.

The total magnitude of problem of breast disease in the hospital setup was calculated as 3.5%.

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Table 3: Sex wise incidence of breast disease in a hospital setup

Sex	Total patients attending OPD (N)	Patients involved	Percentage (%)
Male	27674	78	0.2
Female	17693	1511	8.5
Total	45367	1589	3.5

Considering the sex distribution of breast disease among a total of 45367 new cases, 1511 females had breast disease, thus hospital incidence of breast disease in females 8.5%. The study also revealed 78 males to have breast disease, thus hospital incidence of breast disease in males was 0.2%. The total magnitude of problem of breast disease in the hospital setup was calculated as 3.5%.

Among 78 males who had breast disease, all 78 had benign breast disease in form of Gynaecomastia which were excluded from study.

Table 4: Magnitude of problem of breast disease (Benign vs Malignant) among females

Nature of Disease	No of females	Percentage (%)
Benign	1236	81.81%
Malignant	275	18.19%
Total	1511	100%

Considering the magnitude of problem of breast disease among 1511 females, benign breast disease was found in 1236 (81.81%) of females while malignant breast disease was seen in 275 (18.19%) of females.

Table 5: Side of involvement of breast

Side of involvement	No of patients (N = 1236)	Percentage (%)
Right	595	48.1
Left	519	42
Both	122	9.9

In the present study of 1236 female patients with benign breast diseases, 595 (48.1%) had right sided breast involvement while 519 (42%) patients had left breast involvement whereas bilateral involvement was seen in 122 (9.9%) patients.

Table 6: Pattern of benign breast diseases

S.N	Diagnosis	Total
1	Fibroadenoma	837(67.90%)
2	Fibroadenosis	251(20.30%)
3	Breast abscess	64(5.1%)
4	Mastitis	36(2.9%)
5	Galactocoele	28(2.2%)
6	Lipoma	6(0.48%)
7	Phylloides tumour	8(0.64%)
8	Tuberculosis	1(0.08%)
9	Giant Fibroadenoma	4(0.32%)
10	Multiple fibroadenoma	1(0.08%)
11	Total	1236(100%)

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Among a total of 1236 with benign breast diseases, fibroadenoma was the most common lesion constituting 842 (68.12%) cases which included 837 (67.90%) fibroadenomas, 4 (0.32%) giant fibroadenomas and 1(0.08%) multiple fibroadenomas. Fibroadenosis (presently termed fibrocystic disease) was the second most common lesion constituting 251 (20.30%) of all cases. Breast abscess was seen in 64 (5.1%) of all cases while mastitis constituted 36(2.9%) cases. Other benign breast diseases included galactoceles 28(2.2%) cases, cystosarcoma phyllodes tumour 8(0.64%) cases, tuberculosis 1(0.08%) case and lipomas 6 (0.48%) cases.

Discussion

Background knowledge of general features of individual breast diseases such as incidence, age distribution, symptoms and palpatory features are very important for correct diagnosis of breast diseases. Benign pathological breast conditions accounts for about 70-80% of all the clinical presentations related to the breast and are estimated to be ten times more common than carcinoma of the breast in the developed countries of the world (Dixon *et al.*, 1994).

The limited literature available suggests that benign breast disease is a common problem in the developing countries as well (Krishnaswamy *et al.*, 2003). The incidence of these presentations varies in different geographical areas according to the spectrum of the benign breast diseases encountered (Shukla *et al.*, 1992).

The present cross-sectional study was carried out in a rural medical college & hospital during the period 1st January 2013 to 30th June 2014. A total of 198 female patients with benign breast diseases were included in the study. The observations and findings can be discussed as follows.

In the present study, Out of 200 patients of benign breast disease, 2 (1%) were males and 198 (99%) were females with male to female ratio of 1:99. Khanna *et al.*, (1998) conducted a review study over 1031 breast biopsies registered in pathology in 22 years out of which 971 (94%) were females and 60 (6%) were males, thus the male to female ratio was 1: 16. Irabor (2008) conducted a retrospective study of 149 breast biopsies over a period of eight years and three months out of which 144 were females and 5 were males, thus the male to female ratio was 1: 28.8. A total of 161 lumps were studied out of which 11 had bilateral lesions.

In the present study, out of 198 patients, 88 (44%) had right sided breast involvement while 88 (44%) had left breast involvement whereas bilateral involvement was seen in 24 (12%) patients. (Akhator *et al.*, 2007) conducted a five year retrospective review of 212 histopathologically proven benign breast lesions and concluded that right side was involved in 69 (44.8%) cases and left side in 76 (49.4 %) whereas 9 (5.8%) patient had bilateral involvement. All the authors' studies have shown that left side was more commonly involved than the right side. The findings in the present study are in discordance with the studies reported in the literature.

In the present study, among the benign breast diseases, fibroadenoma was the most common constituting 142 (71%) lesions out of which 138 (69%) were solitary fibroadenomas and 4 (2%) were giant fibroadenomas. Similar results were obtained by (Khanna *et al.*, 1988) (38.4%), (Iyer *et al.*, 2000) in (35.0%), and (Mayun *et al.*, 2008) in (39.8%). In all the above mentioned series, fibroadenoma was the most common benign breast disease. Thus, the present study is in concordance with the studies available in the literature.

The next common was fibroadenosis constituting 189 (26.5%) lesions. Iyer *et al.*, in 2000 reported similar incidence (28.3%) of fibroadenosis and (Irabor *et al.*, 2008) in (22.7%). The present study is in concordance with the study of (Iyer *et al.*, 2000) and (Irabor *et al.*, 2008). (Siddiqui *et al.*, 2003) and (Akhator *et al.*, 2007) showed decreased incidence of fibroadenosis i.e. 13% and 14.2% respectively.

In the present study of 198 patients, breast pain which was seen in 132 (66%) patients, while nipple discharge was seen in 18(9%) patients. Krishnaswamy *et al.*, (2003) examined total 216 patients and found that breast pain was present in 123 (56.9%) patients while Nipple discharge was present in only 3(1.4%) patients. (Memon A *et al.*, 2007) in their study of 500 young females (15 – 25 years) found that breast pain was complained by 210 (71.42%) patients.

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Conclusion

Most of the benign breast diseases are commonly seen in younger age group and usually presented with either breast lumps or nodularity, breast pain and nipple discharge of long duration. The efficacy of clinical diagnosis was equivalent to fine needle aspiration cytology or histopathology confirming that most of the benign breast diseases can be diagnosed clinically with precision.

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