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Benign Breast Diseases: Profile at a Teaching Hospital

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Abstract Benign breast diseases are the most common cause of breast problems. About a quarter of women during her lifetime will suffer from a benign breast disorder that requires some form of treatment. The most common symptoms are breast pain, lumpiness or a lump and nipple discharge. Triple assessment that includes clinical examination, imaging like ultrasonography (USG) or mammography and a pathological examination – FNAC or core needle biopsy has a very high accuracy rate in diagnosing, discrete benign breast diseases and this can be used for reassurance. This was a hospital based prospective study to determine the frequency of benign breast diseases and their pattern. Demographic data, investigations and histopathological diagnosis were collected and analyzed from patients who attended presenting to the department of surgery with breast complaints. The clinical diagnoses were compared with final diagnosis. After that they were appropriately managed. There were 160 patients in the cohort. Out of the patients presenting with benign breast diseases female (96%) were predominant. The majority of the patients (67%) were in the age group of 21 years to 40 years. The commonest presentation of benign breast diseases was pain (45%), followed by lump (26%). Fibroadenoma accounted for 46%. This study showed that among the benign breast diseases in females there were preponderance of mastalgia and fibroadenoma followed by fibrocystic diseases.

Keywords: *Benign Breast Disease, Fibroadenoma, Triple Assessment*

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1. Introduction

Breast is a organ which undergoes cyclical changes under the influence of various hormones throughout a woman's reproductive life. The pattern of breast diseases, include congenital, functional, inflammatory, neoplasm and others [1,2]. Benign Breast Diseases (BBDs) is one of the most common diseases in the females of any society. It is a group of breast diseases which is troublesome to the patient but is not cancer, nor do they progress to cancer. Up to 30% of women suffer from some benign breast disorders and this compels them to seek treatment [3]. Throughout the world, it has been proven that benign breast diseases are more prevalent when compared to malignancies of breast. In a study conducted in Nepal revealed that benign breast conditions were 61.7% whereas malignancy accounted for 15.3% [4]. Hormones and growth factors act on the epithelial and stromal elements of breast leading to Aberration in Normal Development and Involution (ANDI) that account for the majority of benign breast diseases [5,6]. Infection to the breast may cause abscess formation. Specific infections includes; tuberculosis and parasitic infection

Triple assessment, which includes clinical examination, imaging and histopathology is the main method of approach in the diagnosis of breast diseases [7,8].

2. Objectives of the study

The study was to observe the pattern of benign breast diseases, among the patients attending surgical OPD in a tertiary care hospital.

3. Methodology

This prospective descriptive study was conducted between January 2015 to May 2015 at Manipal Teaching Hospital, a tertiary level hospital situated in western region of Nepal. The patients presenting with breast complaints to the general surgical outpatient clinics and subsequently treated on outpatient/inpatient basis were taken in the cohort. There were total one hundred and sixty patients of different benign breast diseases.

Ethical committee's approval was obtained from the Manipal Teaching Hospital Ethical Committee prior to the study. Informed consent was also taken from all the patients and confidentiality was maintained.

Inclusion Criteria: Male and female patients of any age group with any benign diseases of the breast were included in this study

Exclusion Criteria: Patients with any obvious or biopsy proven malignant diseases or had been treated for malignancy earlier or operated were excluded from this study.

A detailed history was taken on a proforma. Diagnosis was made by triple assessment.

The demographic characteristics of patients were presented using descriptive statistics. The statistical analysis was performed using Statistical Package for Social Sciences (SPSS) version 16.0 (SPSS, Chicago IL, U.S.A) and Microsoft Windows. The results were plotted in tables, charts and graphs.

Sample size calculation

In a pilot study done prior to the study with 10 patients showed expected Proportion of Mastalgia (Cyclical + Noncyclical) for the diagnosis of Benign Breast Diseases was 0.4, Precision (%) = 8, and Desired confidence level (%)= 95. Required sample size was 144 [9].

4. Results

160 patients were included in the study. Out of the patients presenting with benign breast diseases female (96%) were predominant. Only 4% of the patients were male. (Figure 1).

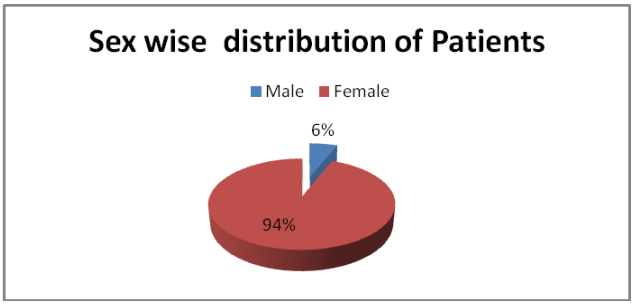

Figure 1. Sex wise Distribution of Patients

The age of the patient with benign breast diseases ranged from 12 years to 67 years. The majority of the patients (67%) were in the age group 21 years to 40 years. The age distribution of the of benign breast diseases is shown in Figure 2.

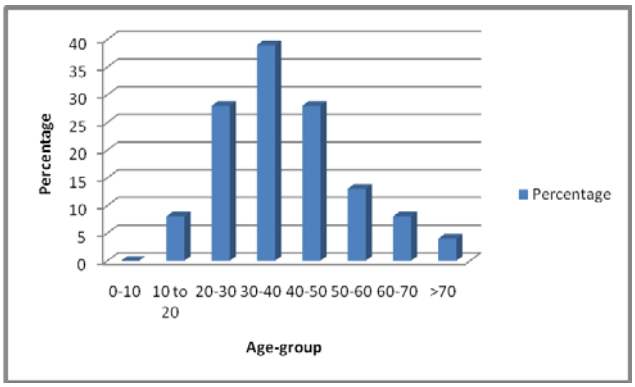

Figure 2. Age Wise Distribution of Patients with Benign Breast Disease

The commonest presentation of patients was breast pain (45%) followed up by lump in the breast (26%), nodularity with pain (17%), discharge from nipple (8%) (Table 1).

Table 1. Modes of Presentation and Incidence of Benign Breast Diseases

Presentation	Number of patients (n=160)	Percentage
Pain	73	45
Lump in the breast	42	26
Pain with nodularity	27	17
Nipple discharge	13	8
Nipple retraction	3	2
Trauma	2	1

Left breast was affected in 44% of patients, right in 32% and 24% of patients had symptoms in both the breasts. (Figure 3).

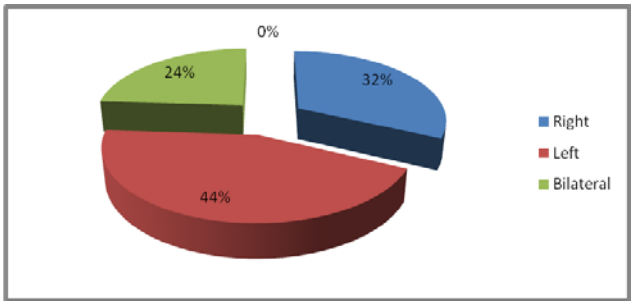

Figure 3. Distribution of The Breast Diseases

Mastalgia are the commonest benign breast diseases constitute 41% of the total. Fibroadenoma form the second most common lesions consisting 27% of benign breast diseases. Fibrocystic diseases, Duct ectasia are common breast problems. Among males, Gynecomastia in the predominant presentation as benign breast disease. (Table 2).

Table 2. Frequency of Benign Breast Diseases (n=160)

Diagnosis	Number of patients	Percentage
Mastalgia (Cyclical + Noncyclical)	30+35=65	41
Fibroadenoma	43	27
Fibrocystic Diseases	21	14
Abscess	11	5
Duct Ectasia	7	4
Gynecomastia	6	4
Lipoma	4	2
Fat Necrosis	2	1
Accessory Breast and Nipples	1	1

Figure 4. Bilateral Accessory Breast with Nipple in Axilla

The treatment modalities given to the patients with above mentioned benign breast disease are in Table 3.

Table 3. Treatment for Benign Breast Diseases

Diagnosis	Conservative	Excision	Aspiration	Incision and Drainage	Microdochectomy	Total
Mastalgia	65					65
Fibroadenoma	29	14				43
Fibroadenosis	15	6				21
Abscess			2	9		11
Duct ectasia	4				3	7
Gyanecomastia	3	3				6
Lipoma	1	3				4
Fat necrosis	2					2
Accessory Breast	1					1

5. Discussions

Benign breast diseases include a heterogenous group of condition which range from normal to aberrations in the physiology, to frank diseases [5,6]. Benign breast diseases are more common than malignant lesions. In a similar study by Kumar et al. in western part of rural India of 380 cases of benign breast disease, right sided breast diseases in 47.6% t, 39.7% had left sided and 12.63% bilateral. Fibroadenoma was the most common and constituting 42.1% of cases [10].

Our study has mastalgia as a significant problem accounting for 41% followed up by of all fibroadenoma 27% of the cases. Results are similar to a study in urban India by Krishnaswamy [11]. This is lower than the frequency reported by Raju GC et al [12] who found fibroadenoma in 39.8% of the cases in a review of 1726 breast lesions, but it is much higher than in England (7.7%) and nearly equal to USA (18%) and less than African American people (35%) [13]. In our study, young females of third and fourth decades (67%) formed the highest incidence Many studies concluded that the incidence of benign breast lesions begins to rise during the 2nd decade of life and peaks in the 4th decade [2,6,14].

FNAC is a very useful diagnostic tool in breast diseases and most of patients with palpable lump in our study had undergone FNAC of the lump prior to excision. Park et al. had the positive predictive value of FNAC for BBDs as 87.5% [15].

88% patients with mastalgia were premenopausal in our study. Breast abscess are mostly seen in lactating mothers but it might occur in female who do not lactate [1]. In a study done by Ullahet al, 15% had breast abscesses [16]. Breast abscess in our study accounted for 11% of cases and all of them were lactating mothers except one.

Conservative management of benign breast diseases after excluding carcinoma was practiced in most of the patients of this study. 67% of the patients with fibroadenoma were treated conservatively and they fall in age group < 35 yrs.

Regardless of the type of breast disease, the goal of the evaluation must be to rule out carcinoma. The extent of the evaluation will vary with the type of clinical problem and the patient's risk status.

6. Conclusion

The spectrum of benign breast diseases in our study population does not appear to differ much from other studies with a concern towards the presence of lump or lump accompanied by pain.

Benign breast disease can no longer be ignored. Much more work needs to be done to collect data about the incidence and prevalence of benign breast diseases in Nepal. In developing countries like Nepal, the treatment of breast diseases poses a problem because of illiteracy, poverty, lack of accessibility to appropriate good healthcare.

Abbreviations

ANDI: Aberration in Normal Development and Involution
BBD: Benign Breast Diseases
FNAC: Fine Needle Aspiration Cytology
SPSS: Statistical Package for Social Sciences
USG: Ultra Sonography

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Declaration of Conflicting Interests

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