

Spectrum of Benign Breast Diseases in Females- a 10 years study

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Abstract

The study was conducted to determine the frequency of various benign breast diseases in female patients, to analyze the percentage of incidence of benign breast diseases, the age distribution and their different mode of presentation. This is a prospective cohort study of all female patients visiting a female surgeon with benign breast problems. The study was conducted at Chittagong Metropolitan Hospital and CSCR hospital in Chittagong over a period of 10 years starting from July 2007 to June 2017. All female patients visiting 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. The findings were tabulated in excel sheet and analyzed for the frequency of each lesion, their distribution in various age group.

Keywords: Spectrum, Breast Diseases, Benign, Risk, Management.

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Introduction

Breast is a dynamic organ which undergoes cyclical changes under the influence of hormone and growth factors throughout the reproductive life of a woman¹. The vast majority of the breast lesions are benign and far commoner than the malignant one, but they are not given significant attention as compared to malignant one. The significance of this entity is that around 50% of women in

their life time would have had the sign or symptom of benign breast disease². Both the physical and specially the psychological sufferings of those females should not be underestimated and must be taken care of. In fact some benign breast lesions can be a predisposing risk factor for developing malignancy in later part of life^{2,3}. So it is essential to recognize and study these lesions in detail to identify the high risk group of patients and providing regular surveillance can lead to early detection and management. As the study includes a great number of patients, this may reflect the spectrum of breast diseases among females in Bangladesh.

Aims and Objectives

The objective of the study was to determine the frequency of various breast diseases in female patients and to analyze the percentage of incidence of breast diseases and different mode of presentation.

Materials and Methods

A total of 3555 patients were diagnosed with breast lesions over a period of ten years in two private clinics were the participants of this study. This is a prospective (historical) cohort study carried out at Chittagong Metropolitan Hospital and CSCR (Centre for Specialized care and Research) Hospital over a period of ten years starting from July 2007 to June 2017. All female patients visited with breast problems from 18 to 55 years of age were included in the study. Initially 4147 patients visited with breast problems. Among them 12.23%(507/4147) patients who came mostly with the complaints of lumpiness in their breasts and a few of them who came for checkup and found normal both clinically and with imaging were excluded from the study. Another 85 patients were also excluded from the study who were diagnosed as sebaceous cysts in their breasts. So after excluding 592 patients out of 4147, total 3555 patients were included in the study. Detailed history of patients were recorded that included age, marital status, parity, age of last child, breast feeding history and age at menopause. Family history of breast diseases, specially breast cancer, history of contraception used were recorded.

Thorough examination of breast and axilla done. Ultrasonography or mammograms were done according to age. Fine needle aspiration cytology (FNAC) was advised in patients with lump to confirm the diagnosis. Core biopsy/ incision/ excision biopsy was done in patients with inconclusive FNAC report.

The Data were tabulated in excel sheet and analyzed for the frequency of each lesion.

Results

A total of 3555 patients from 18 to 55 years were included in the study during the study period from July 2007 to June 2017. Among the patients fibroadenoma was the most common breast disease seen in 32.26% (1147/3555) of patients, followed by mastalgia in 24.22% (861/3555) patients. Fibrocystic disease was seen in 18.80% (668/3555) patients. 7.68% (273/3555) patients were presented with axillary lump, which were mostly due to accessory axillary breast tissue or lymphadenopathy. 4.59% (163/3555) patients were visited with breast abscess and acute mastitis, many of them were breastfed mothers. Most of the patients presented with nipple discharge were diagnosed as a case of duct ectasia, 3.68% (131/3555), although some young patients had galactorrhea due to hyperprolactinemia. 3.49% (124/3555) patients were diagnosed as carcinoma breast. Granulomatous mastitis was not an uncommon entity and 2.19% (78/3555) patients were diagnosed as granulomatous mastitis and among them 59 were idiopathic granulomatous mastitis and 19 were tubercular mastitis. 1.21% (43/3555) patients had cracked nipple/nipple erosion/ulcer. 0.79% (28/3555) patients came with the complaints of their unequal breast size, some of them complained of breast atrophy, some hypertrophy. Some other patients were visited who had lipoma, phyllodes, milk fistula, scar etc. The different spectrum of breast diseases with their frequency are shown in Table I.

Table-I: Frequency of breast diseases.

Serial No	Diseases	Frequency	Percentage (%)
1.	Fibroadenoma	1147	32.26
2.	Mastalgia	861	24.22
3.	Fibrocystic Disease	668	18.80
4.	Axillary lump	273	7.68
5.	Abscess & mastitis	163	4.59
6.	Duct ectasia	131	3.68
7.	Carcinoma Breast	124	3.49
8.	Granulomatous Mastitis (IGM & TB)	78	2.19
9.	Cracked Nipple/ Nipple erosion/ Nipple ulcer	43	1.21
10.	Unequal breast size	28	0.79
11.	Others	39	1.10
	Total	3555	

Discussion

A vast majority of lesions that can occur in breast are both benign and malignant. Benign breast diseases constitute a heterogenous group of lesions including developmental anomalies, inflammatory lesions, epithelial and stromal proliferations and neoplasms. Much concern is given to malignant lesions of the breast because it is one of the most common malignancy in women specially in Western countries; however benign lesions are far more frequent than malignant ones⁴⁻¹².

In our study fibroadenoma was the most common BBD seen in 1147 patients, which is 32.26% of the total 3555 patients. Murillo et al found 38% incidence of fibroadenoma in a study of about 698 patients with BBD, which is not dissimilar with our study¹³. Khanzada et al showed 27% incidence of fibroadenoma in a study of 275 patients¹⁴. Other two studies showed a little higher incidence of 42% and 45% respectively^{15,16}.

Mastalgia was the second most common (24.22%) BBD seen in our study but Khanzada et al found 11% patients with mastalgia. 25% of the referral to breast clinics in West are due to mastalgia and it affects up to 70% woman at some times during their lives¹⁷.

The third most common disease in our study was fibrocystic disease (18.80%). In three other studies the frequency was 21%, 36% and 17% respectively^{14,16,15}. Because of low literacy rate and more rural areas, the females affected with fibrocystic disease tend to see a surgeon when the symptoms are alarming.

In our study a good number of patients (273) were presented with axillary lump, mostly with accessory axillary breast tissue.

The next entity was breast abscess and acute mastitis (163 patients). This was most commonly observed in lactating females during early lactating period. Barton et al found acute bacterial mastitis common at any age but most frequently in lactating breasts¹⁸.

In our study 3.68% patients had duct ectasia which can mimic invasive carcinoma clinically¹⁹. It usually presents with nipple discharge, palpable subareolar mass, pain, nipple inversion or retraction¹⁴.

In our study 124 patients that is 3.49% of all breast patients were diagnosed as carcinoma breast. Study showed that the highest incidence of breast cancer was in Northern America and Oceania; and the lowest incidence in Asia and Africa²⁰.

Granulomatous mastitis was diagnosed in 78 patients (2.19%). Among them IGM in 59 patients and Tuberculosis in 19 patients. The term "Idiopathic granulomatous mastitis" is used for granulomatous lesions without an identifiable cause. Identification of etiology requires microbiologic and immunologic testing in addition to histopathologic evaluation¹⁹. In our study we also diagnosed the cases with microbiologic, immunologic and histopathologic testing. Though GM is rare in developed countries, this is not uncommon in Asian countries. The overall incidence is less than 0.1% of all breast lesions in developed countries and 3-4% in developing countries²¹.

43 patients presented with cracked nipple, nipple erosion/ulcer. Most of them were breastfed.

28 patients visited with unequal breast size, some with macromastia and some with atrophy.

Some of the patients presented with other diseases like lipoma, phyllodes, milk fistula etc.

Conclusion

Breast diseases are one of the commonest problems in females. Breast cancer is the most common cancer in women worldwide and is the fifth most common cause of death from cancer in women. So much more concern is given for the screening, diagnosis and management of breast cancer. But BBD is far more frequent than malignancy. Our study also showed similar results. In our study fibroadenoma is the commonest breast lesion. Mastalgia is the next common problem. Fibrocystic disease also occurs in a great number of females. It is essential to give importance in assessing these benign lesions to reduce morbidity from those diseases and identify any risk for cancer development.

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