Benign Breast Diseases in Tertiary Center in North Bihar: A Clinico-pathological Study

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Abstract

Background: To study the patterns of clinically benign breast disease (BBD) in females and to correlate them with the pathological findings.

Materials and Methods: A total of 124 females who attended the Surgery Department in Darbhanga Medical College, Bihar, with various forms of BBDs, during the period from November 2009 to November 2011, were studied. Early diagnoses by doing a triple assessment such as a clinical examination, fine-needle aspiration cytology or a core needle biopsy, and imaging methods such as ultrasonography or mammography. The clinical diagnoses were compared with the cytological or histological findings wherever possible, and their accuracies were evaluated.

Results: Out of the 124 female patients who were studied, 100 patients who presented with breast lumps, aberration of normal development and involution (ANDI) accounted for 58% of the cases, which was the highest number of patients. Fibroadenoma and inflammatory breast lesions came next with 36% and 6% cases, respectively. Most patients of ANDI 77% presented as painless lump which is need to be differentiated from carcinoma. Most of the patient (61%) presented within 6 months of development of breast lesion showing increasing awareness in females of rural India.

Conclusion: BBDs are common in female patients, and ANDI is the most common of them. The triple assessment provided a quick diagnosis, and it alleviated unnecessary anxiety from the patients about breast cancer. The clinical diagnosis of a breast lump, as confirmed by cytology and histology, was accurate in most of the cases.

Key words: Benign breast disease, Pathology, Risk factors, Triple assessment

INTRODUCTION

Benign breast diseases (BBDs) are a group of breast diseases which are not considered as cancer. They are most common cause of breast problems in females and are more frequent than those of malignant.[1-6] It is at least 10 times more common as compared to breast cancer in the western countries.[7] 30% of the women who suffer from BBDs require treatment at some part of the time during their entire life.[8] Clinical examination imaging-like ultrasonography (USG) or mammography

and a pathological examination – fine-needle aspiration cytology (FNAC) or core needle biopsy are the initial triple assessment methods, which are done by a majority of the patients to differentiate with discrete BBDs to be given immediate reassurance.

Early diagnosis and treatment planning help in alleviating unnecessary anxiety about breast cancer and those BBDs patients with an increased risk of malignancy.

Many of benign diseases of breast go unreported by patients in India, especially in rural population, due to several cultural barriers and financial condition. Breast is an organ of beauty and pride for a female apart from performing the important physiological function of lactation.

Serious cosmetic problems may result from disease itself, repeated small biopsies or removal of breast quadrants in an attempt to search for small mammographic lesions. With

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this background scenario, it was considered appropriate to determine the spectrum of BBD in this part of world, especially in rural population as it constitutes major portion of our country's demography.[9]

MATERIALS AND METHODS

This study was done on the breast lump in 124 cases at a tertiary center in North Bihar during the period from November 2009 to November 2011. A total of 124 women, who were treated for BBDs, were included in this study. The patients were required to give written informed consents before their enrollment in the study. Ethical clearance was obtained from institute ethical committee.

Inclusion Criteria
Only those cases were included in the study whose diagnosis was confirmed histologically.

Exclusion Criteria
Women with an obvious malignant disease or those who had been treated for malignancy earlier were excluded in this study.

Detailed case history of patients was recorded which included age, marital status, parity, age of menarche, age at first pregnancy, and age at menopause. Patients whose age was 50 years or above and having no menses for at least 2 years at the time of presentation were considered to be postmenopausal.

History of contraception and family history of breast diseases, especially breast cancer was recorded. Special examination of lump and axilla was made with giving attention to any clinical signs of malignancy.

USG or mammograms were done when required. FNAC was performed on patients with lumps to confirm the diagnosis. Core biopsy/incisional or excision biopsy was done in patients with inconclusive FNAC report. Data were entered on pre-designed pro forma and frequencies of various BBDs in different age groups were calculated.

RESULTS

A total of 124 female patients who attended in the Surgery Department for breast diseases, were studied in the Department of General Surgery.

In this study, aberrations in the aberration of normal development and involution (ANDI) were found to be highest in incidence followed by fibroadenoma and inflammatory lesions (Table 1).

The most common sign and symptom of presentation in the present series was painless mass in the breast, followed by painful mass in the breast (Table 2).

In this series, maximum number of cases were seen in the age group 41-50 years (5th decade) followed by 4th, 3rd, and 2nd decade in that order (Table 3).

In this study, maximum number of fibroadenoma was encountered in the age group of 3rd decade followed by 2nd decade (Table 4).

In this study, equal number of inflammatory lump cases were seen both in 3rd decade (21-30 years) and 4th decade (31-40 years) (Table 5).

Maximum number of patients reported with the history of <6 months followed by ½ year to 1 year, 1 year to 1½ years, and 2 years in that order (Table 6).

Among the patients having ANDI, maximum number of patients were having up to 3 children, followed by up to

Table 1: Incidence of various types of breast lump

Lesions	Number of cases	Percentage
ANDI	72	58
Fibroadenoma	44	36
Inflammatory	8	6
Total	124	100

ANDI: Aberration of normal development and involution

Table 2: Mode of presentation

Signs and symptoms	ANDI	Benign tumor	Chronic non-specific mastitis	Total	Percentage
Painless mass in breast	56	44	-	100	81
Painful mass in breast	16	-	8	24	19
Nipple discharge	-	-	-	-	
Ulceration of the skin	-	-	-	-	
Retraction of nipple	-	-	-	-	
Total	72	44	8	124	

ANDI: Aberration of normal development and involution

Table 3: Distribution of ANDI (causing breast lump) according to age

Age in years	Number of cases (%)
11-20	4 (5056)
21-30	16 (22.22)
31-40	20 (27.78)
41-50	32 (44.44)
51 and above	-
Total	72 (100.00)

ANDI: Aberration of normal development and involution

6 children and no children, in that order. Similarly, among the benign tumor group, maximum patients were having up to 3 children and an equal number of the patient was in the group of no children and up to 6 children. In the inflammatory group, both patients had up to 3 children (Table 7).

DISCUSSION

Breast is a dynamic organ which continuously undergoes normal structural and physiological changes. When these normal changes (pubertal, cyclical, pregnancy, lactational, and menopausal) exceed their limit and raise concern for the woman, they are labeled as BBD.

ANDI, in this study, constituted (58%). These lesions of the breast must be excluded as they frequently mimic cancer clinically. Foxcroft et al.[10] found that 87.4% of

the women those who attended the Wesley Breast Clinic had presented with breast lumps, while in the series of Ratanachaikanont,[11] a breast lump was the presenting symptom in 72.35% of the 331 benign breast patients. The corresponding figure for our study was 81%. In this series, the maximum incidence of ANDI was observed in the age group of 41-50 years (44.44%) many authors such as Adesunkanmi and Agbakwuru, Ihekwaba found that the incidence of the fibrocystic changes ranged from 29.5% to 42.2% for the benign breast lumps.[12,13] This study, result was having similar figure.

In this series, all cases of ANDI presented with a lump, painless in 77.77% and painful in 22.33%. Clinically, such mass is confused with carcinoma and biopsy is the answer to differentiate it from carcinoma of the breast and thus avoiding over treatment.

Fibroadenomas accounted for 36% of the benign breast lumps in our study. Our finding is on lower side with most of the available literature on benign breast lumps, where the frequency of fibroadenoma ranged from 46.6% to 55.6%.[12-15] The peak incidence of fibroadenoma ranged from the 2nd to 3rd decade of life, which was consistent with the findings of other studies. FNAC was the quickest and the most reliable method which helped in making the diagnoses of the breast lumps.

There is (6%) of inflammatory lump of the breast were encountered in this series which is less as compared to past studies,[16-19] and all the lesions histologically were of chronic non-specific mastitis. Among the inflammatory lump, equal incidence was observed in the age group 21-30 years and 31-40 years. These lesions were incidentally diagnosed on biopsy.

The incidence of BBDs begins to rise in the 2nd decade, and it peaks in the 4th or 5th decade as compared to the

Table 4: Distribution of fibroadenoma according to age

Age in years	Number of cases (%)
10-20	20 (45.45)
21-30	24 (54.55)
31 and above	-
Total	44 (100.00)

Table 5: Age distribution in inflammatory lump (chronic non-specific mastitis)

Age in years	Number of cases (%)
10-20	-
21-30	4 (50)
31-40	4 (50)
41 and above	-
Total	8 (100)

Table 6: Distribution of the various lesions according to duration of illness

Lesions	<6 months	6 months-to 1 year	1-1½ years	1½-2 years	Total
Fibroadenoma	28 (63.64)	12 (27.27)	0	4 (9.09)	44
ANDI	40 (55.56)	20 (27.77)	4 (5.56)	8 (11.11)	72
Chronic non-specific mastitis	8 (100)	-	-	-	8
Total	76	32	4	12	124
% of the series	61	26	3	10	100

ANDI: Aberration of normal development and involution

Table 7: Distribution of various breast lumps according to parity

Lesions	No children	Up to 3 children	>3 up to 6 children	>6 children	Total
ANDI	8	48	16	-	72
Fibroadenoma	4	36	4	-	44
Chronic non-specific mastitis	-	8	-	-	8
Total	12	92	20	0	124

ANDI: Aberration of normal development and involution

malignant lesions, for which the incidence continues to rise after menopause.[20-23] We advised follow-up every 3 months for both the low and high-risk categories since some studies have shown the progression of the low-risk category to carcinoma.[24] Most of the patient 61% within 6 months of development of breast lesion showing increasing awareness in females of rural India. Maximum incidence of lesion is seen in woman having up to 3 children similar to findings of Minami *et al.*[25] It is suggested that there is need for non-morphologic markers (genetic/molecular) so that chemoprevention agents can be used as an alternative to surgery and so that the histopathological criteria can be refined for the risk assessment.

CONCLUSIONS

BBDs are a common problem in women. The most common age group which is affected is the 21-30 years age group. Among the breast lumps, ANDI is the most common followed by fibroadenoma and chronic non-specific mastitis. The other lumps are relatively uncommon.

The risk factors for developing carcinoma in the patients were also identified, and the patients were advised follow-up. Since there is no consensus on the morphologic risk markers, in future, molecular genetic markers may help in the risk stratification, which will help in a better clinical management.

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