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Original Research Article

Breast fibroadenoma and its clinical perspectives: a prospective observational study

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ABSTRACT

Background: To study the patterns of breast fibroadenoma in females and to co-relate them with the pathological findings.
Methods: Sixty six females who attended the Surgery Department in Darbhanga Medical College, Bihar, a tertiary centre in rural area, with benign breast lump during the period Bihar during period of November 2009 to November 2011, were studied. Early diagnoses by doing a triple assessment like a clinical examination, FNAC or a core needle biopsy and imaging methods like 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 66 confirmed fibroadenoma female patients who were studied, most patients presented as a painless lump which is need to be differentiated from carcinoma. Most of the patient (63%) presented within 6 months of development of breast lesion showing increasing awareness in females of rural India. The maximum number of patient presented (55%) is of 2nd to 3rd decade. It was found that maximum number of patients have upto three children due to early marriage in rural background.
Conclusions: Fibroadenoma is a common cause for breast lump even in rural background. 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.

Keywords: Benign breast disease, Pathology, Risk factors, Triple assessment

INTRODUCTION

Benign Breast Diseases are common cause of breast problems in females and it is more frequent than the malignant ones.[1-6] Fibroadenoma is the most common breast tumour in adolescent and young women.[7-10] They usually present as solitary, firm, rubbery and non-tender lumps. Upto 30% of the women who suffer from benign breast disease will require treatment at some time in their lives.[11] A triple assessment which is done by a clinical examination imaging like ultrasonography (USG) or mammography and a pathological examination-FNAC or core needle biopsy, during the initial consultation, allows a majority of the patients with discrete BBDs to be given immediate reassurance. Since a majority of the benign lesions are not associated with an increased risk for subsequent breast cancer, unnecessary surgical procedures can be avoided. Making an early diagnosis and planning the treatment helps in alleviating unnecessary anxiety about breast cancer and those benign breast disease patients with an increased risk of malignancy.

In women between adolescence and the mid-20s, the lobules and stroma in the breast respond to hormonal stimuli in an exaggerated fashion with the development

of single and multiple palpable fibroadenomas.[12] A fibroadenoma larger than 6 cm is referred to as a giant fibroadenoma, and must be distinguished from a phyllodes tumor. Unlike fibroadenoma, phyllodes tumors may enlarge quickly and can visibly distort the breast.[13] Fibroadenomas are benign solid tumors developing from a terminal duct lobular unit due to uncoordinated proliferation of the epithelial and stromal component (presumably due to estrogen stimulation) which involves part of the surrounding tissues.

Benign diseases of breast of minor consequences go unreported by patients in India, especially in rural population, due to cultural barriers and financial constraints. Breast is an organ of beauty and pride for a female apart from performing 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. Objective of this study was to determine the frequency of fibroadenoma among female patients of rural areas. Clinically, benign breast diseases is classified as (a) physiologic swelling and tenderness, (b) nodularity, (c) breast pain, (d) palpable lumps, (e) nipple discharge and (f) infections or inflammation. In this study, we profiled the incidence fibroadenoma and its clinical features. Secondly, we attempted at correlating the clinical and pathological findings wherever possible.

METHODS

The present clinico-pathological study on the breast lump in 66 cases, was carried out at a tertiary centre in north Bihar during period of November 2009 to November 2011. A total of 66 women who were treated for fibroadenoma were included in this study. The patients were required to give written informed consents prior to their enrolment in the study and a clearance was taken as per the institute's ethical committee guidelines.

Inclusion criteria

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

Exclusion criteria

Women with an obvious other breast disease were excluded in this 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. Core biopsy/incisional or excision biopsy was done in patients with inconclusive FNAC report. Data was entered on pre-designed proforma and frequencies fibroadenoma different age groups were calculated.

RESULTS

A total of 66 female patients who attended in the Surgery Department for breast diseases, were studied in the Department of General Surgery.

Table 1: Distribution of benign breast lump according to age.

Age in years	No. of cases	Percentage (%)
10-20	30	45.45
21-30	36	54.55
31 & above	-	-
Total	66	100.00

Maximum no. of benign tumours were encountered in the age group of 3rd decade, followed by 2nd decade, in the present study.

Maximum no. of patients reported with the history of less than 6 months, followed by ½ year to 1 year, 1½ years to 2 years in that order.

Table 2: Distribution of the fibroadenoma according to duration of illness.

LESIONS	Less than 6 months	6 months to 1 year	1 year to 1½ years	1½ years to 2 years	Total
Fibroadenoma	42 (63.64)	18 (27.27)	0	6 (9.09)	66

Maximum patients were having upto 3 children and equal number of patient was in the group of no children and upto 6 children.

Maximum number of mother having breast cancer had breast fed their babies less than a year, followed by more than a year up to 2 years.

Maximum number of breast lesions were found to be of the size of 2.5 to 5 cm, followed by less than 2.5 cm and 5cm to 10cm , which are equal in number.

Table 3: Distribution of various breast lumps according to parity.

Lesions	No children	Upto 3 children	>3 upto 6 children	>6 children	Total
Fibroadenoma	6	54	6	-	66

Table 4: Size of lump in various breast lesions.

Lesions	No. of cases			Total
	Upto 2.5 cm	>2.5 cm to 5 cm	>5 cm to 10 cm	
Fibroadenoma	6	54	6	66

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 labelled as Benign breast disease.

The peak incidence of fibroadenoma ranged from the 2nd to the 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.

The incidence of fibroadenoma begins to rise in the 3rd decade as compared to the malignant lesions, for which the incidence continues to rise after menopause.[14-16] 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.[17] Most of the patient 63% present 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 upto 3 children similar to findings of Miami et al.[18] 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 histo-pathological criteria can be refined for the risk assessment.[19]

CONCLUSION

Fibroadenoma is a common problem in women. The commonest age group which is affected is the 21-30 years age group. Diagnosis by FNAC is reliable, yet confirmation by biopsy is required in women >35years and with unusual presentation.

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.

The majority of breast lesions in young women are identified on an incidental breast exam either by the patient or the healthcare provider. Even though fibroadenomas are benign lesions, sometimes there may be a need to confirm the histology. A firm, rubbery lesions in young women should not always assume to be benign. If ever in doubt, get a mammography or perform a biopsy. Missing a malignant breast lesion in a young female can lead to litigation.

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