An observational study in tertiary healthcare Centre on benign breast diseases

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Abstract

Background: Benign breast disorders constitute the majority of breast complaints presented by young females to a surgical OPD. It is 10 times more common than cancerous conditions and deserves attention due to its high prevalence, impact on woman's life associated anxiety and possibility of some turning into cancerous conditions.

It is divided into aberrations and abnormalities in development, epithelial and stromal proliferations, inflammations and neoplasms. In this study we aim at finding the prevalence, age, clinical presentation of commonest benign breast conditions and its correlation with patho logical and radio logical studies.

Materials & Methods: The 98 cases of benign breast diseases between the age group of 15-45 years underwent triple assessment consisting of clinical examination, ultrasonography and fine needle aspiration cytology. Patients who were diagnosed with malignancy were excluded from the study.

Conclusion: BBDS are a common problem among females in the reproductive age group. It is important to differentiate between fibroadenoma and fibro adenosis. FNAC and ultrasonography are a useful aid in diagnosis of benign breast lesions.

Keywords: Benign breast disease, Fibroadenoma, Fibro adenosis, FNAC, Ultra sono graphy

Introduction

Benign breast diseases are a group of heterogenous disorders that consists of epithelial and stromal prolife rations, develop mental ab normalities, in flamma tory lesions and benign neoplasms. BBDS are an ignored entity and receive a second - hand treatment in com parison with breast mali gnancies. Hence it is important to arrive at an appropriate diagnosis to give an accurate surgical plan and also rule out malignancy which is the major cause of apprehension in these patients. BBDs are pathologically divided into non-proliferative lesions, proliferative lesions with or without atypia, atypical proliferative lesion. They are hormone induced and there fore usually seen in the reproductive period of life with dramatic fall thereafter. Estrogen regulates the develop Ment of ductal tissue development of ductal tissue, progesterone facilitates ductal branching and lobuloal veolar development and prolactin regulates milk production.1-8 They are clinically classified as (a) physiologic swelling and tenderness, (b) nodularity, (c) breast pain (d) palpable lumps, (e) nipple discharge and (f) infections or inflammation. The common disorders are fibroadenoma, fibro adenosis, sclerosing breast cysts, mastalgia, breast abscess, duct ectasia, galactocoele, lipoma, sebaceous cyst. With growing awareness in the rural population about breast pathologies, a female with a breast lump is one of the commonest presentations in outpatient departments. Clinical examination would be followed in most patients with an ultrasonography and a confirmatory diagnosis under the microscope. Patients usually have an anxiety regarding the diagnosis of malignancy in breast lesions for which ultrasound and FNAC play a vital role in diagnosis.9,10 In this study we are evaluating the clinical profile of benign breast diseases in relation to age, sex and clinical presentation; to correlate clinical, with radiological and pathological findings

Aim and objectives

The objective is to study the distribution of various benign breast diseases in relation to age, presentation, severity and to correlate with relevant pathological and radiological investigations in a rural setup

Methods

This is a prospective observational study conducted in the department of general surgery, as ram medical college Eluru, from a period of January 2022 to January 2023All patients who came with complaints of breast disorders such as breast lump, asymmetry of breasts, pain, nodularity, nipple discharge were included in our study.

Sampling method

Sampling method was of purposive sampling. Inclusion criteria All patients who presented to OPD with breast complaints between the age group of 15 to 45 years and were subjected to all three modes of examination that is clinical, ultrasonography and FNAC.

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Exclusion criteria

Those who were diagnosed with breast malignancy, or were treated before for the same were ruled out from the study.

Sample selection procedure

Patients who presented with complaints of benign breast disease to surgical OPD a detailed history including menstrual history and drug history was taken and thorough examination was performed. She is then sent to

ultrasonography to identify the type and location of the lesion. Under informed consent patient was sent to pathology department where she undergoes FNAC either direct or under USG guidance. Samples sent were followed up and those that turned out to be benign breast lesion were included in the study. The study was conducted after% taking permission from institutional ethics committee. Informed consent will be obtained from all patients. Participation in study will not affect treatment in any way. Data analysis was done using Software SPSS-version 21.0

Results

A total of 98 patients with benign breast diseases were evaluated and the results are as follows Age distribution of patients with benign breast diseases The most common age group of presentation was between 20-30 years followed by 30-40 years of age (Table 1).

Table 1: Age distribution of patients with benign breast diseases.

Disease	<20 years	<20_30 years	30_40 years	>40 years c
Fibroadenoma	2	17	5	_
Fibro adenosis	3	25	13	_
Fibroadenoma with fibro adenosis	1	10	3	_
Breast abscess	_	4	3	_
Duct ectasia	_	1	2	_
Lipoma	1	2	_	1
Sebaceous cyst	_	_	3	_
Accessory breast	1	_	_	
Phyllodes tumour	_	_	1	_
Total	8	59	30	1
			30	

The most common benign breast disease found in our Study fibroa denosis followed by fibroadenoma

Among all benign breast diseases right breast Involve Ment was more common than left breast. Bilateral Involvement was seen in some cases.

Table 2: Most common diagnosis and site among patients presenting with benign breast disease.

Disease	No of cases	Percent age	Left	Right	Bilate ral
Fibroadenoma	24	24.48	5	17	2
Fibro adenosis	41	41.83	14	22	5
Fibroadenoma with fibro adenosis	14	14.28	4	6	4
Breast abscess	7	7.14	2	5	_
Duct ectasia	3	3.06	1	2	_
Lipoma	3	3.06	0	3	_
Sebaceous cyst	4	4.08	1	3	_
Accessory breast	1	1.02	1	_	1
Phyllodes tumour	1	1.02	1	_	_

Patients were subjected to fine needle aspiration cytology and ultrasound to confirm the clinical diagnosis of breast abscess, duct ectasia, lipoma, Sebaceous cyst, accessory breast tissue and phyllodes Tumour correlates with fine needle aspiration in this Study. The correlation between clinical and FNAC in our Study for fibroa denoma and fibro adenosis was 95.8% and 92.68% respectively due to variations in presentation

Out of 24 patients of fibroadenoma diagnosed clinically 18 were diagnosed as fibroa denoma and 6 were Diag

nosed as fibro adenosis on ultrasound. Out of 41 Patients diagnosed as fibro adenosis 36 had similar Clinical and radiological correlation 3 were fibroa denoma and 2 had normal study.

Table 3: Clinical correlation of diagnosis with Fine needle aspiration cytology

BBD	Clinical diagnosis	No of case's diagnosed by fnac [correct]	No of cases diagnosed by fnac [incorrect]	Percentage of accuracy
Fibroadenoma	24	23	1	95.8
Fibro adenosis	41	38	3	92.68
Fibroadenoma with fibro cystic disease	14	12	2	85.7
Breast abscess	7	7	0	100
Duct ectasia	3	3	1	100
Lipoma	3	3	0	100
Sebaceous cyst	4	4	0	100
Accessory breast	2	2	0	100
Phyllodes tumour	1	1	0	100

Table 4: Clinical correlation of benign breast diseases with ultra sonography result

BBD	Clinical diagnosis	No of cases diagnosed by usg correct	No of cases diagnosed by usg incorrect	Percentage of accuracy
Fibroadenoma	24	18	6	75
Fibro adenosis	41	35	6	85.3
Fibroadenoma with fibrocystic disease	14	11	3	78.5
Breast abscess	7	7	0	100
Duct ectasia	3	2	1	66.6

Discussion

Breast undergoes varying degrees of changes due to influence of hormones, systemic and local factors in the reproductive age group.

In a study carried out by Kumar et al it was asserted that BBDs are 5-10 times more common in Indian rural population than breast cancers.

They also observed that the prevalence of BBDs differs in different geographic areas, and BBDs are widespread in developing countries but women ignore the breast lump due to lack of awareness

They proposed that general features of individual breast diseases such as lack of expert advice, illiteracy, social taboo, and lack of knowledge result in delay in both benign and malignant lesions in diagnosis.

In our study most commonly patients with benign breast diseases presented with breast lump followed by breast pain and nodularity of breast. Similar results were shown in a study conducted by Modhia et al and To nape et al where they found that maximum patients presented with painless swelling of the breast followed by pain and swelling in the breast.

The most common age group of presentation was 20-30 years of age followed by 30-40 years of age. Similar studies done by Khanzada et al where 120 out of 275

patients diagnosed with BBD belonged to 3rd decade Out AA conducted a study in Nigeria where similar results were seen. In this study we also found most common benign breast disease presenting to this Centre to be reset fibro adenosis.

They commonly presented with breast lump followed by nodularity of breast, most commonly in

the age group of 20-30 years of age. Fibroadenoma was the second most common lesion and occurs in the age group of 20-30 yrs followed by 30-40 years.

Most common presenting symptom was breast lump followed by breast pain in fibroadenoma. It usually feels as a breast mouse on palpation and fibro adenosis as a nodularity.

Conclusion

Benign breast diseases are a commonly encountered Cases in a surgical OPD among women in reproductive Age group.

The most common presentation is of breast Lump followed by breast pain and nodularity of breasts

Fibrocystic diseases is the most common benign breast Disorder in our setup and the most common age group of Presentation is in the 3rd decade of life.

Diagnosis of benign breast disease based on clinical, FNAC and ultrasonography is a reliable method.

Differentiation between fibroadenoma and fibro adenosis Is relevant in planning surgical treatment for the patient. Most of them can be diagnosed by a clinician with a good Clinical knowledge and experience and relevant Investigations.

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