

Original article:

Clinico-pathological study of benign breast disease

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Abstract:

Introduction : Benign breast disease are commonly found as painless palpable mass the diagnosis may be corroborated with specific benign features found on physical examination, mammography and ultrasound. The purpose of present study was to assess the various age of presentation of benign breast diseases, their mode of presentation and various modes of management

Method: Fifty cases of benign breast diseases were studied during the period from June 2012 to May 2014.

Result: In all benign breast disease Fibroadenoma is most common with presenting mainly in the age group of 11-20 years. Ultrasound is an easy and noninvasive method of diagnosis in most benign breast diseases. FNAC is more accurate, safe, cost effective and OPD procedure for diagnosis of benign breast disease but only drawback is that it is a invasive procedure. Excision is most commonly used and most satisfactory method of treatment.

Conclusion: Benign breast disease present mainly 11 -30 year of age group. It can be diagnosed clinically and confirmed by FNAC in more than 90% of the cases. Excision is the main stay of treatment

Keywords: Benign breast disease, ANDI, Fibroadenoma, Cystosarcoma phyllodes, FNAC, ultrasonography, Mammography, Excision.

Introduction

Mammary glands, or breasts, are a distinguishing feature of mammals¹. It is unique in that its development and growth are under the control of numerous hormones and various physiological states such as pregnancy and lactation. Until recently benign disorders of the breast were regarded, as relatively unimportant: far more attention was focused on breast cancer. This has resulted in many patients with benign breast disease receiving rather scant attention from clinicians, and there has been relatively little academic investigation into this complex subject. Benign breast disease has also suffered from the major disadvantage of a hopelessly confusing terminology, inadequate classification and poor correlation between clinical, radiological and pathological features².

During the past decade there has been increasing interest in benign breast disease for a number of reasons. As patients demand investigation and treatment for symptoms of benign breast disease. This has, in turn, increased the number of women referred to specialist breast disease units these have participated in scientific studies on the classification and treatment of their condition². The term benign breast disorder (BBD) can be defined as any nonmalignant breast condition and encompasses a wide range of clinical and pathologic disorders. Although BBD is not life threatening, clinicians require an in-depth understanding of its significance so that clear explanations can be given to affected patients, appropriate treatment can be instituted, and unnecessary long-term follow-up can be avoided³.

The aberrations of normal development and involution (ANDI) classification of BBD provides an overall framework for benign conditions of the breast that encompasses both pathogenesis and the degree of abnormality⁴. It is a bidirectional framework based on the fact that most BBD arise from normal physiologic processes.

Most BBD can be regarded as minor aberrations of normality and hence do not demand specific treatment. This being the case, any active management of these conditions is based on considerations such as an accurate diagnosis, the patients concern, and interference with quality of life³.

Objectives:

- To study the age distribution of various benign breast diseases
- To study different types of benign breast diseases, their mode of Clinical presentation and Pathology.
- To study various types of management for different types of benign breast diseases.

Methodology:

This clinicopathological study includes cases of benign breast disease is a prospective study conducted in J.J.M. Medical college, Davangere, during the year June 2012 to May 2014.

This survey was mainly meant for studying the age distribution, to evaluate the different types of benign diseases of the breast and their mode of clinical presentation and pathology and to evaluate the various modes of management for different types of Benign Breast Diseases.

Inclusion Criteria:

Patient who get admitted, who are clinical diagnosed and confirmed by histopathology examination representing various types of

benign disease of the breast are included in the study.

Exclusion Criteria:

Patients diagnosed clinically as benign breast disease but in whom histopathological examination reports proved to be otherwise are excluded from the study.

Totally 47 cases came for follow up to the outpatient, but 3 cases did not come inspite of appeal made to them, mainly because of financial difficulties, partly because of their carelessness and probably because of the long distance from which the patients came to the hospital for their original treatment.

Method of Clinical Survey:

This is a study comprising of 50 cases of benign breast disease which includes 36 cases of fibroadenoma, 6 cases of Cystosarcoma phyllodes, 2 cases of lipoma, 2 cases of galactoceles, 2 cases of tubular adenoma and 2 cases of ductal ectasia.

After admission to the hospital, a detailed history was taken regarding the presenting complaints particularly the duration, mode of onset of lump and pain in breast, its progress, nipple discharge, history of undergoing operation previously for a similar lump, Family history of occurrence of benign breast disease, menstrual and obstetric history, history of taking contraceptive pills and whether the patient was pregnant or lactating. All details were entered in the charts specially prepared (proforma)

After taking the history, a general examination of the patient was done and general condition noted as regards to anaemia and hypoproteinemia. A detailed local examination of presenting lesion was then carried out and a diagnosis arrived at.

After routine haematological and urine examination, patient were subjected to specific investigation like ultrasonography of the breast. FNAC of the lump and Mammography. All patient underwent operative treatment either in the form of excision biopsy or enucleation or wide

excision or simple mastectomy. The excised specimen was sent for histopathological examination for confirmation of clinical diagnosis. All the patients were followed up for varying periods for evidence of recurrence.

Results:

Table 1: quadrant topography of diseases in present study

Disease	Total	UO	UI	LO	LI	Central	>IQ	Bilateral
Fibroadenoma	36	12	4	6	4	1	7	2
Cystosarcoma Phyllodes	6	2	1	1	0	-	2	-
Galactocele	2	1	-	-	-	-	1	-
Lipoma	2	2	-	-	-	-	-	-
Tubular Adenoma	2	2	-	-	-	-	-	-
Ductal Ectasia	2	-	-	-	-	2	-	-
Total	50	19	5	7	4	3	10	2

UO- Upper Outer, UI- Upper Inner, LO- Lower Outer,
LI- Lower Inner, > 1Q- More than one quadrant

All the cases in my study were subjected to USG of Breasts. After verifying with histopathological diagnosis, we found that USG of the breast was able to detect 28 out of 36 cases of Fibroadenoma correctly ie in 77.78% of cases, 4 out of 6 cases of Cystosarcoma phyllodes were detected by

USG correctly ie in 66.67% of cases. USG was accurate in the diagnosis of a 2 cases of Lipoma and tubular adenoma. USG was not able to diagnosed Galactocele and Ductal Ectasia. It was helpful in differentiating solid from Cystic lumps of the breast.

Table 2: cyto-histological correlation in B.B.D.

Histological Diagnosis	F.A (%)	C.S.P. (%)	B.S.P. (%)	B.E.H (%)	B.D.C (%)	N.S.M (%)
Fibroadenoma (36 cases)	33 (91.67%)	-	1 (2.78%)	1 (2.78%)	1 (2.78%)	-
Cystosarcoma Phyllodes (6 cases)	1 (16.67%)	4 (66.67%)	-	1 (16.67%)	-	-
Galactocele (2 cases)	-	-	-	-	2	-
Lipoma (2cases)	-	-	-	-	-	2 (100%)
Tubular Adenoma (2 cases)	2 (100%)	-	-	-	-	-
Ductal Ectasia (2 cases)	-	-	-	-	2	-

FA - Fibroadenoma, CSP- Cystosarcoma Phyllodes, BSP- Benign Subareolar Papillomatosis, BEH- Benign Epithelial Hyperplasia, BDC- Benign Ductal Cells, NSM- Non Specific Mastitis.

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Table 3: Histopathological types of fibroadenoma

Type	No.of .cases	%
Intracanalicular	30	83.33%
Pericanalicular	4	11.11%
Both	2	5.56%

Table 4 : Various types of treatment of benign breast diseases

Diseases	Excision	Wide excision	Simple Mastectomy
Fibroadenoma	36	-	-
Cystosarcoma Phyllodes	3	2	1
Gaiactocele	2	-	-
Lipoma	2	-	-
Tubular Adenoma	2	-	-
Ductal Ectasia	2	-	-
Total	47	2	1

Discussion:

Benign Breast Diseases a common disease affecting women in our country. The majority of diseases affecting the female breast were benign disease.

The most common benign breast disease was fibroadenoma occurring in 72% of cases. In the study Conducted by Rangabashyam et al⁵ in 1983, fibroadenoma was the main type of disease in 57%. In the series of Khanna et al⁶, in 1988, fibroadenoma was the main type of disease in 40.8%. Farrow JH et al⁷, reported fibroadenoma as the commonest B.D. of female breast Oluwole and freeman⁸ in 1979, reported them as the most black women and adolescent white females.

Other types of benign diseases found in my study was a two cases each of lipoma (4%), galactocele(4%), tubular adenoma (4%) and Ductal ectacia(4%). Out of 50

cases, 44% cases were in the age group of 21-30 years. The next common age group is 11-20 years accounting for 40%. This corresponds to the study of Sushila Khanna⁶ in which 40.06% Cases were in the age group of 21 -30 years.

Fibroadenoma was the commonest benign disease with highest incidence in age group 11-20 years (47.22%). The youngest patient was 16 years old and the oldest patient was 45 years old. Duray and Collegues⁹ described fibroadenoma most likely to occur in adolescents. Pike and oberman¹⁰ reported the tendency of fibroadenoma to occur at the time of menarche. Mies and Rosen¹¹ have described a series of patients with an average age of 26 years with fibroadenomas. Foster ME. et al¹² in their series of 362 cases of fibroadenoma reported the largest number of patients in the age group of 21 -25 years.

Age group	Present study	Rangabashyam et al ⁵ study	Sushila Khanna et al ⁶ study
11-30 Years	88.9%	75.39%	82.78%

In my study cystosarcoma phyllodes occurred mainly in 31-40 Years age group accounting for 50% followed by 21-30 years age group accounting for 33.33% and 41-50 Years age group (16.67%)

Galactocele seen in the age group of 21-30 years (100%). Lipoma, Tubular Adenoma and Ductal Ectasia present in age group 11-20 years and 21-30 years accounting for 50% each. There was one case with a past history of excision of lump and diagnosed as recurrent phyllodes tumour. Moffat and colleagues¹³ have reported incomplete excision of phyllodes tumours as a major determinant for local recurrence. Briggs and colleagues¹⁴ have reported that Malignant behaviour in phyllodes tumour of young women is extremely rare.

The most prominent presenting Symptoms was the presence of painless lump in 40 cases (80%) and 10 cases presented with painful lump (20%). In 36 cases of fibroadenoma, 30 cases (83.33%) presented with a painless lump which was accidentally noticed by the patient. 6 cases (16.67%) presented with a lump which was painful and pain started after the lump. The pain was reported as dull aching, non radiating, Continuous and not in relation to menstruation. No cases of fibroadenoma presented with nipple discharge. Most of the fibroadenomas occurred with a duration of 4-6 months (33.33%).

In 6 cases of Cystosarcoma phyllodes, 4 cases (66.67%) presented with a painless lump and 2 cases (33.33%) presented with a lump associated with pain which started later. 3 cases (50%) occurred with a duration of 4-6 months. 1 case had a history of previous operation for a similar lump. No cases presented with nipple discharge.

In my study, of the 36 cases of fibroadenoma 5 cases (13.89%) presented with multiple lumps and 2 cases (5.56%) had Bilateral involvement, In Haagensen's¹⁵ series of 619 cases of fibroadenomas, multiple fibroadenoma occurred in 19.9%. Forster ME. et al¹² reported multiplicity of fibroadenomas in 7.5% cases in their series of 362 cases of fibroadenomas. Of all fibroadenomas 10% of patient have multiple fibroadenoma on presentation².

FNAC correctly diagnosed 91.67% of cases of fibroadenoma. Linsk et al¹⁶, reported an accuracy of 60.4% in 1972. Hand Uma et al¹⁷ reported in their series of h 360 fine needle aspirations as efficiency of 98.3% in diagnosis. Of the 6 cases of Cystosarcoma phyllodes FNAC correctly diagnosed 4 cases (66.67%) as benign phyllodes tumour. 1 case was misdiagnosed as fibroadenoma and 1 case was reported as benign epithelial hyperplasia. All the FNAC reports were indicative of the benign nature of lesions. In my study, the clinical diagnosis

correlated well with the histopathological diagnosis.

All the 36 cases of fibroadenoma underwent surgery in the form of enucleation or excision biopsy. Excision was not difficult in any of the cases. 2 cases of bilateral fibroadenomas underwent bilateral excision. The incisions used were either a subareolar or semicircular incision and radial incision following the natural lines in the skin.

Of the 6 cases of Cystosarcoma phyllodes, 3 cases underwent excision, 2 cases underwent wide excision and 1 case underwent simple mastectomy.

Two cases of each Galactocele, Lipoma, Tubular adenoma and Ductal Ectasia underwent excision. A drain was kept for all cases which was removed after 48 hours. Totally 47 patients came for follow up to the outpatient. Recurrence of the lesions was not noticed in any of the patients who came for follow up for periods upto 6 months. Haagensen has

reported recurrence of benign breast tumours to be very rare in a period of 3 years. It is mainly because of a smaller lesion being unnoticed during the first operation.

Conclusion

In the present study USG has an accuracy of 77.78% for detection of Fibroadenoma and 66.67% for Cystosarcoma Phyllodes. FNAC forms the major investigatory modality with fair accuracy of 91.67% present to diagnose fibroadenoma and 66.67% for Cystosarcoma phyllodes. Intracanalicular type of fibroadenoma was the most common type of fibroadenoma on Histopathological report (83.33%).

Surgical excision is the effective treatment for most of the benign breast disease nearly upto 90% cases. Wide excision and simple mastectomy needed rarely. Women who came for follow up after surgical procedure were satisfied by treatment.

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