

PROPORTIONS OF VARIOUS BENIGN BREAST LESIONS AMONG WOMEN PRESENTING AT TERTIARY CARE INSTITUTE OF INDIA: A CROSS-SECTIONAL STUDY

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Abstract

Background and Aim: Benign Breast Diseases (BBDs) is a group of non-cancerous breast diseases. 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 clinicians to give immediate reassurance to most of the patients. The aim of the study was to find out the proportions of various benign breast lesions among women aged 18 years and above. **Material and Methods:** A prospective study was conducted in the Department of Surgery, Tertiary care institute of India for a period of 20 Months. Based on the pilot study sample size derived was found to be 102. A performa was filled with patient particulars, history and clinical findings in female patient attending department of surgery OPD with breast related symptoms. Patients will be followed up with histopathological, cytological and radiological studies in indicated cases. The patients will be followed up for 1 year. Most common benign breast related symptoms and condition among the study group and probable risk factors for the same will be analyzed. **Results:** The commonest case among the study population was fibroadenoma 37 (36.27%). The next common was acute breast abscess, followed by fibrocystic disease (9). Lump alone detected either by patient herself or by the clinician was the most common presenting complaint in around 40 patients, followed by lump with pain in around 37, followed by either pain, nipple discharge. Fibroadenoma could be diagnosed clinically with an accuracy of about 89%. Abscess breast, phyllodes tumor and galactocele and few cases of granulomatous mastitis was also able to be diagnosed clinically. **Conclusion:** Fibrocystic disease is commonest amongst proliferative breast lesions followed by Sclerosing adenosis. Breast abscess is the commonest lesion amongst inflammatory breast lesions. Breast self-examination and health education to females is very important in cases of benign proliferative lesions.

Key Words: Benign Breast Diseases, Fibroadenoma, Phyllodes tumor, Ultrasonography

Introduction

The mammary gland is a unique organ in that it is not fully formed at birth, undergoes cyclical changes during reproductive life. Some of the breast diseases occur during reproductive life while some occur during menopausal period indicating relation of these diseases to hormonal stimulation as a causative factor.¹ The breast is the most important feature of female anatomy and an integral part of female reproductive system.¹ They are symbols of female fertility and womanhood. However, reluctance on the part of the patient to complain about breast problems is universal and has led to a neglect of it and often delayed detection even in well-educated females.²

Until recently benign disorders of breast were regarded as relatively unimportant. As a result, many patients with benign breast disease received rather scant attention from clinicians. There have been relatively little academic investigations into complex subject.³ Many women have symptoms of breast disease but few have cancer. Yet these symptoms are understandably a source of great concern for women for women. The challenge for physician is to distinguish between benign and malignant lesions and to know when to treat and when to reassure. Making such

discrimination is not easy as the conditions are diverse and vary in presentation.⁴

Benign Breast Diseases (BBDs) is a group of non-cancerous breast diseases. It is more prevalent than Breast cancer in the west⁵⁻¹⁰ and in-fact is the most common cause of Breast problems in any part of world. About one third of the women who suffer from BBDs will require treatment at some time in their lives.^{11,12} The most common symptoms are lumpiness or a lump, breast pain and nipple discharge. 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 clinicians to give immediate reassurance to most of the patients. Since a majority of the benign lesions are not associated with an increased risk for subsequent breast cancer, unnecessary surgical procedures can be avoided. Those BBDs patients with an increased risk of malignancy like atypical hyperplasia can be given a prompt treatment, a proper follow-up and awareness regarding the risk of breast cancer.

Pathologically, BBDs is divided into (a) non-proliferative lesions, (b) proliferative lesions without atypia and(c)

atypical proliferative lesions. Clinically, BBDs is classified as (a) physiologic swelling and tenderness, (b) nodularity, (c) breast pain, (d) palpable lumps, (e) nipple discharge and (f) infections or inflammation.

The aim of the study was to find out the proportions of various benign breast lesions among women aged 18 years and above.

Material and Methods

A prospective study was conducted in the Department of Surgery, Tertiary care institute of India for a period of 20 Months. Based on the pilot study where the prevalence was found to be 11.05%, considering the confidence interval at 95% and absolute precision at 5 the sample size derived was found to be 102.

Inclusion criteria

Female patients with any breast lump, breast pain or a nipple discharge were included.

Exclusion criteria

Postmenopausal women were excluded, Females who had not yet achieved menarche were not included in the study

After obtaining written informed consent a performa was filled with patient particulars, history and clinical findings in female patient attending department of surgery OPD with breast related symptoms. Patients will be followed up with histopathological, cytological and radiological studies in indicated cases. The patients will be followed up for 1 year. Most common benign breast related symptoms and condition among the study group and probable risk factors for the same were analyzed. The percentage and proportions of patients with different benign breast diseases and their presenting symptoms will be obtained.

Statistical analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2007) and then exported to data editor page of SPSS version 15 (SPSS Inc., Chicago, Illinois, USA). For all tests, confidence level and level of significance were set at 95% and 5% respectively.

Results

A total of 102 study subjects were selected for the purpose of the study and analyzed. The mean age of patients presenting with benign breast disease in this study was 37.2. About 46 patients were below 40 yrs of age and about 10 % were above 60 yrs. Around 82.3% of patients in this study were married. Majority of the patients in this study didn't have any previous history of benign breast disease (Table 1).

The commonest case among the study population was fibroadenoma 37 (36.27%). The next common was acute breast abscess, followed by fibrocystic disease (9). There were 5 cases of duct ectasia, 4 duct papilloma's. Present study showed 3 cases of granulomatous mastitis. There was 1 case of benign phyllodes tumor. There was 1 case of parasitic cyst. There was 1 case of carcinoma breast diagnosed in biopsy in which cytology and radiology was reported as benign (Table 2).

Lump alone detected either by patient herself or by the clinician was the most common presenting complaint in around 40 patients, followed by lump with pain in around 37, followed by either pain, nipple discharge (Table 3).

Majority of the cases were right sided 50.2 % and only 41.4% were left sided and about 8.4% were bilateral. The diagnosis of lumps was confirmed either by cytology or histopathology or in both ways. Fibroadenoma could be diagnosed clinically with an accuracy of about 89%. Abscess breast, phyllodes tumor and galactocele and few cases of granulomatous mastitis was also able to be diagnosed clinically. There was 1 case of carcinoma breast which could not be diagnosed either clinically or cytological and was evident only in histopathology (Table 5).

Definitive diagnosis of fibrocystic diseases, phyllodes tumor and duct ectasia, duct papilloma, dirofilarial cyst was also diagnosed on histopathology. All together the clinical suspicion of benign breast disease turned out to be true with exception of 1 case being turning out to be malignant.

Table 1: Social profile of the study participants

Variable		Number	Percentage
Age (years)	Less than 20	13	12.7
	21-30	33	32.3
	31-40	27	26.47
	41-50	21	20.58
	More than 50	8	7.84
Marital status	No	18	17.64
	Yes	84	82.3
Breast fed	No	23	22.54
	Yes	79	77.45
Previous history of breast disease	No	90	88.23
	Yes	12	11.76

Table 2: Percentage distribution of the sample according to histopathology report

Variable	Number	percentage
No diagnosis/not done	23	22.54
Fibro adenoma	37	36.27
Fibrocystic disease	9	8.82
Inflammatory lesion	7	6.86
Duct ectasia	5	4.90
Duct papilloma	4	3.92
Galactocele	1	0.98
Granulomatous mastitis	3	2.94
Diabetic mastopathy	1	0.98
Fibro adenoma with fibrocystic disease	5	4.90
Parasitic cyst	1	0.98
Simple cyst	1	0.98
Fat necrosis	1	0.98
Carcinoma Breast	1	0.98
epithelial proliferative disorder without atypia	2	1.96
Phyllodes	1	0.98

Table 3: Percentage distribution of the sample according to clinical diagnosis

Variable	Number	percentage
Fibro adenoma	43	42.1
Cyclical mastalgia with nodularity	3	2.94
Fibrocystic disease	18	17.64
Phyllodes	1	0.98
Simple cyst	2	1.96
Parasitic cyst	1	0.98
Abscess	12	11.76
Ductectasia	4	3.92
Papilloma	5	4.90
Periductal mastitis	1	0.98
Granulomatous mastitis	7	6.86
Diabetic mastopathy	1	0.98
Fat necrosis	1	0.98
Fibroadenoma with fibrocystic disease	1	0.98
Chronic mastitis	2	1.96

Discussion

Benign breast diseases include a diverse group of conditions which range from normal, to aberrations in the physiology, to frank disease. The patients of BBDs generally present with combination of these complaints breast lump, breast pain and nipple discharge. It is been proposed that all the patients having discrete breast lumps should be screened by triple assessment to make an early provisional diagnosis.

The patients of BBDs are generally presented with one or more of these complaints Breast lump, breast pain or nipple discharge. It has been recommended that all patients with discrete breast lump should undergo a triple assessment to make an early assessment; by this approach we provided the diagnosis of most of the benign breast conditions within 72 hrs of initial consultation. In the study of foncroft LM et al¹³ they found that 87.4% of the women who attended the

Wesley breast clinic had presented with breast lump, while in the series of Ratnachaikanont a breast lump was the presenting symptom in 75.35% of 331 benign breast patients. The corresponding figure for our study was 39.3%.¹⁴

Acute breast abscess was found in 14 case in our study. However, no cases of gangrene breast are found in our study as compared to the study done by Shukla and Kumar which reported two case of breast abscess progressing to gangrene as a result of neglect. Majority of inflammatory conditions of breast are found in the lactating mother. A study conducted among Indian women shows that pain was the most common breast related complaint and mastalgia was the most common clinical problem occurring in the 3rd decade of life.

Most Western studies have shown that oral contraceptive pills with decreased progesterone reduced risk of benign

breast disease.¹⁵ A study in the black population revealed number of relationship between use of oral contraceptives and incidence of benign breast diseases.¹⁴ Use of oral contraceptives is extremely low in Indian population and the effect, protective or otherwise, cannot be ascertained with certainty.¹⁵

In the present study pain was the 2nd common presentation whereas mastalgia (cyclical and noncyclical) together was found to be the 2nd common clinical problem occurring in 3rd and 4th decade. Mastalgia was essentially a clinical diagnosis and USG and mammography were used as ancillary tools for diagnosis.

Fibroadenoma was the most common breast lesion in our study 36.2 % of total breast lesion and 39% of benign breast lesion. Similar findings were reported by Amr et al,¹⁷ Kulkarni et al¹⁸ Malik et al¹⁹ In their study they found most common benign breast lump was fibroadenoma. Amr et al¹⁷ reported 30.7%, Kulkarni et al¹⁸ 62.32%, Malik et al¹⁹ 41 %, cases of fibroadenoma.

Sonography can be used to accurately classify some solid lesions as benign allowing imaging follow up rather than biopsy.²⁰ The Sample size is very less and in-depth analysis of the tumors with tumor markers will give better picture about the benign breast disease.

Conclusion

Comprehensive clinical history and a triple assessment would suffice the tool for effective diagnosis of Benign breast diseases within 72 hrs. With correct radiological and cytological assessment unnecessary morbidity associated with surgeries can be avoided in some patients.

Fibrocystic disease is commonest amongst proliferative breast lesions followed by Sclerosing adenosis. Breast abscess is the commonest lesion amongst inflammatory breast lesions. Breast self examination and health education to females is very important in cases of benign proliferative lesions. The presence of a discharge in association with palpable mass and positive results on mammogram or ultrasound requires evaluation of the mass. Breast lumps evaluation includes palpation, mammography (or ultrasound imaging), and biopsy of the lump. Histopathology plays an important role in the diagnosis of benign breast diseases. When correlated with clinical data, mammographic findings, breast ultrasonography and extensive use of fine needle aspiration cytology, the histopathological examination led to the early diagnosis of a benign breast disease.

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