International Surgery Journal
Selvakumaran S et al. Int Surg J. 2017 Jan;4(1):339-343
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20164466

Original Research Article

Study of various benign breast diseases

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Received: 02 October 2016
Accepted: 24 October 2016

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ABSTRACT

Background: Benign breast disorders can be defined as any non-malignant breast condition and encompasses a wide range of clinical and pathological disorders. BBD are very common and 1/3rd of women are suffering from this disorder in one time of their life. The aim of this study is to look at the patterns of benign breast diseases, the mode of presentation, management and to identify risk factors.
Methods: This descriptive study was done in 168 patients presented to the surgery OPD department with benign breast disorders. All the patients with breast related disease were included in this study. Both male and female patients were included in this study. Patients with obvious or biopsy proven malignant diseases were excluded in this study.
Results: The study comprised of 168 patients with BBD; the commonest being Fibroadenoma which formed 55.9% followed by fibroadenosis 20.8%. The other benign lesions observed were cystosarcoma phylloids, acute abscess, chronic abscess, tuberculous mastitis, antibioma, cysts, galactocele, gynaecomastia, traumatic fat necrosis, duct papilloma and mastalgia.
Conclusions: Benign breast disease is a neglected entity despite the fact that it constitutes the majority of breast complaints. Benign breast disease can no longer be ignored. Much more work needs to be done to collect data about the incidence and prevalence of benign breast diseases. Breast self-examination and education to the females is required for early diagnosis and prompt treatment as majority of anxiety and worry of having breast cancer can be alleviated.

Keywords: Benign breast diseases, Fibroadenoma, Triple assessment

INTRODUCTION

Benign breast Diseases is defined as any non-malignant breast condition and encompasses a wide range of clinical and pathologic disorders.[1] It is one of the most common diseases in the females of any society. Up to 30% of women suffer from BBD in anytime of their life and this compels them to take the treatment.[2] Even though majority of the breast complaints are BBD compared to malignancy it is a neglected entity.[3] So, in depth understanding of its significance and right treatment can be instituted so that long term follow-up can be avoided.

Triple assessment, which includes clinical examination, imaging and histopathological examination is now considered a gold standard approach to the diagnosis of breast lump.[4] Early diagnosis and prompt treatment will avoid unnecessary surgery and patient's anxiety of having breast lump as carcinoma will be relieved. The incidence of benign breast lesions begins to rise during the second decades of life and peaks in the fourth and fifth decades, as opposed to malignant diseases, for which the incidence continues to increase after menopause, although at a less rapid pace.[5-12] With the recent importance given to early diagnosis of cancer of the

breast and its early detection by both the patient and her physician, more benign conditions are likely to be detected than earlier as proven in the developed world.

The aim of the study was to see the patterns of benign breast diseases, the mode of presentation and management in this part of the region. It also helps in identifying the risk factor of the disease.

METHODS

This prospective descriptive study was done for 168 patients presenting in the Surgery OPD of Rajah Muthiah Medical College and Hospital, Chidambaram, India from April 2008 to March 2010.

Inclusion criteria

All breast related complaints and lesions of the breast were included in this comprehensive study. It includes both male and female patients

Exclusion criteria

Patients with any obvious cancer or biopsy proven malignant diseases which had been treated for malignancy earlier or operated were excluded from this study.

A detailed history was taken and diagnosis was done by Triple assessment like Clinical examination, imaging like USG and mammography and histopathological examination like FNAC, core needle biopsy or excision biopsy. Surgery was done wherever needed and reassurance with conservative treatment was given to those patients who were required.

RESULTS

Incidence: The study group was comprised of 168 patients with benign breast diseases. A spectrum of lesion was identified with commonest being fibroadenomas followed by fibroadenosis. Fibroadenoma formed 55.9% of the cases, then fibroadenosis 20.8%

The other benign lesions observed were cystosarcoma phylloids, acute abscess, chronic abscess, tuberculous mastitis, antibioma, cysts, galactocele, gynaecomastia, traumatic fat necrosis, duct papilloma and mastalgia. Incidence of the condition is given in Table 1.

Table 1: Incidence percentage of benign breast disease.

Benign Breast disease	No. of patients	Incidence percentage
Fibroadenoma	94	55.9
Fibroadenosis	35	20.8
Cystosarcoma phylloids	4	2.3
Acute abscess	8	4.7
Chronic abscess	2	1.2
Granulomatous mastitis	1	0.6
Antibioma	1	0.6
Cysts	2	1.2
Galactocele	2	1.2
Gynaecomastia	7	4.1
Duct papilloma	2	1.2
Mastalgia	10	6.0

Table 2: Comparison of various studies of benign breast disorders.

Lesion	Shukla et al (n = 927)	Khanna et al (n = 1031)	Shukla et al (n = 272)	Rangabashyam et al (n = 251)
Fibroadenoma	46.4	40	37.8	56.7
Cystosarcoma phylloides	0.6	4.2	10.6	23
Duct papilloma	0.9	0.7	2.9	23
Fibroadenosis	14.3	0	0	16.2
Lobular hyperplasia	0	0.7	0	0
Sclerosing adenosis	0	4.8	3.3	0
Fibrocystic disease	0	14.3	0	0
Cysts	7.9	0	11.3	0
Fibrosclerosis	7.4	0	1.6	0
Duct ectasia	7.6	4.4	2.5	0
Chronic abscess	7.8	11.3	1	2.6
Tuberculosis	5.1	27	0.7	2.7
Filariasis	0.1	0	9.3	2.5
Cysticercosis	0.1	0.9	0	0
Fat necrosis	1.2	0	14	4.3
Galactocele	0	12	0	6.9

Clinical presentations

Most patients presented with complaints of a lump in the breast, pain or a combination of both. 84 of the patients presented with a lump without any other complaint; 24 patients complained of pain alone and 58 patients complained of a lump with associated pain. Two patients diagnosed later with duct papilloma presented with complaints of discharge from the nipple (Figure 1, 2 and 3). 90 patients had a right sided lesion and 58 left sided lesion; bilateral disease was present in 20 patients (Figure 4).

Age distribution

Fibroadenomas were the most common benign lesion forming 55.9% of the cases. They occurred in the age group 15-25 years with the average being 20 years. Fibroadenosis was the next common with 21% incidence in 31-40 years average was 35 years of the 168 cases. The youngest was 15 years old with a fibroadenoma. The oldest was 66 years old with fibroadenosis.

Investigations

FNAC was carried out in 147 cases, out of which the results were confirmed to be similar to the histopathologic examinations in 120 cases. Ultrasound was carried out in 21 patients where FNAC results were acellular, inconclusive or could not be relied on due to insufficient material and in patients with non-palpable lesions. Mammography was done only in 11 cases. Core needle biopsy was done in patients where all investigations were inconclusive, as in cystosarcoma phylloids, a patient with chronic abscess, granulomatous mastitis and antibioma. The aim is to rule out malignancy.

Treatment

Out of 94 cases of fibroadenoma, 86 were operated by excision, 15 had fibroadenosis. Abscesses were incised and drained under antibiotics cover. Three phylloids tumor were done wide local excision. One phylloids tumor of 13x15 cm size was done with simple mastectomy. Two ductal papillomas and 2 breast cysts were managed surgically. Gynaecomastia patients were subjected to websters operation. TB mastitis was confirmed by excisional biopsy and followed up by anti-tubercular therapy. Healed lesions were found to be associated with improved general condition of the patient.

DISCUSSION

Benign Breast diseases are at least 10 times more common than breast cancer in hospital clinics.[13] Currently malignant to benign ratios of 1:10 are seen in breast clinics.[9] At the King's College Hospital Breast Clinic, a study was conducted on breast conditions and 80% of patients with breast symptoms had breast diseases.

In a case study of benign breast diseases in Greater Boston in 1968 fibroadenoma was commonest and found during the second decade of life commonly in married nullipara.[6]

In India, however, although benign breast diseases had a high incidence they have always been overshadowed clinically by breast cancer. In one series of 1031 benign breast disease cases 971 were females and 60 males. Of the female patients, 752 had tumors and tumorous conditions, 219 patients had infective lesions.

In the present study, out of 168 patients 121 had tumor and 12 had infective conditions. Fibroadenomas were the commonest tumor with 94 patients. Fibroadenosis was the next common lesion, making up to 35 cases. These result parallels of Khanna study where 396 cases were fibroadenomas and 135 cases were of fibroadenosis 14. The Rangabashya study established over 5-years also demonstrated fibroadenomas to be the commonest followed by fibroadenosis and inflammatory disease.[1]

As far as inflammatory conditions were concerned, the present study involved 12 patients, 8 acute abscesses, 2 chronic abscesses and 1 case of tuberculosis mastitis and 1 case of antibioma. The tuberculosis mastitis patients had been diagnosed only after performing excisional biopsy with clinical examination and other investigative procedure proving inconclusive.

In the Khanna study non-specific mastitis, tuberculosis mastitis, plasma cell mastitis and parasitic lesions, i.e. cysticercosis were documented. Comparison of various studies of benign breast disorders conducted in India is given in Table 2.[1,14,15] The result of the present study parallel the Rangabashyam series of 1998 (Table 3).

Table 3: Comparison of present study with Rangabashyam series.

Lesion	Rangabashyam	Present study
Fibroadenoma	56.7	55.9
Fibroadenosis	16.2	20.8
Acute abscess	-	4.7
Cystisarcoma phylloides	2.3	2.3
Galactocele	6.9	1.2
Tuberculosis mastitis	2.7	0.6
Chronic abscess	7.9	1.2
Duct ectasia	-	-
Fat necrosis	1.3	-
Filariasis	2.3	-

Presenting complaints of the patients were mostly of the lump alone followed by lump and pain, with a minimal

number complaining of pain alone. These varying attitudes of the patients to breast pain may explain the lower number of patients with mastalgia diagnosed in the Indian studies performed compared to Western studies where the commonest breast symptoms as such is mastalgia. With respect to investigations FNAC was the initial procedure of choice and was carried out on 147 patients. Contemporary evidence from a number of studies show FNAC to be highly sensitive and even more specific in the diagnosis of benign lesions from the breast.

Figure 1: Phylloids tumor left breast 15cm x 13cm.

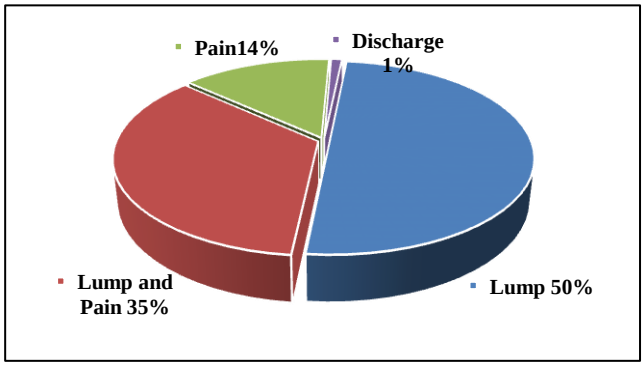

Figure 2: Presenting symptoms in benign breast disease.

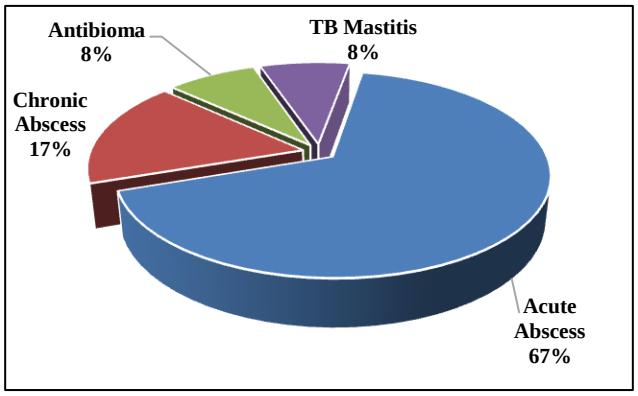

Figure 3: Incidence of inflammatory conditions in benign breast disease.

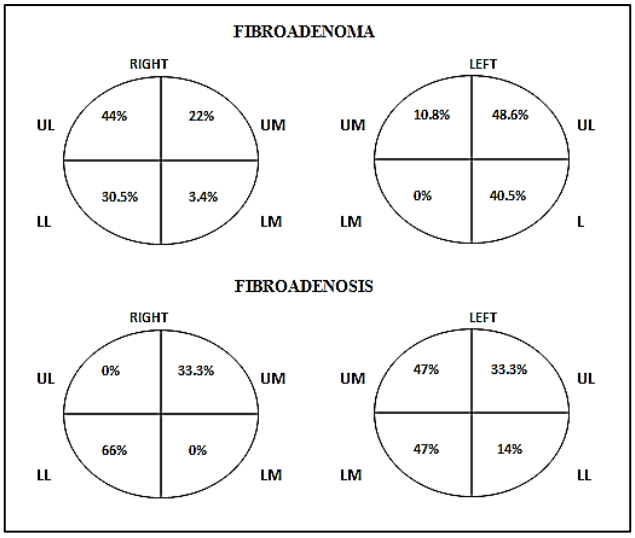

Figure 4: Quadrant-wise distribution of lesions in benign breast disease.

With regard to this study, the sensitivity and specificity of FNAC in diagnosing fibroadenoma were calculated as follows. Sensitivity and specificity were thus determined to be 89.8% and 87.8%. Positive predictive value accuracy of FNAC in identifying fibroadenoma was 94.2%.

Sensitivity and specificity of FNAC in diagnosing fibroadenosis was also calculated. Sensitivity was 77.2% and specificity was 96%. Positive predictive (accuracy) of FNAC fibroadenosis was 89.6%.

Ultrasonography

Ultrasonography (USG) is valuable in differentiating solid from cystic lesions. In this study USG was useful in confirming the diagnosis made of a cyst after FNAC produced fluid aspirate. Conservative management was then adopted. In patients under 30-years where mammography is not useful and FNAC has proved inconclusive, ultrasound can be used. Clinically suspicious cystic lesions can also be evaluated for features of malignancy.

Mammography

As very few patients (11) underwent mammography at their own expenses its usefulness in this study could not be evaluated. Other studies reported mammography to be of value in women over 35-years where malignancy was suspected with absence palpable lesion, despite persistent breast complaints.

CONCLUSION

The age of the patients influenced the nature of benign lesions. Fibroadenoma (55.9%) was the most common, in this age group 15-25 years followed by fibroadenosis

(20.8%) in the age group of 25-35 years. Inflammatory lesions formed 7.1%. Tuberculosis mastitis, although very low in sites of incidence continues to occur. Anti-tuberculous therapy lesion is the mainstay of treatment, with surgery being the last resort. The majority of patients presented with a lump of about 50%, next common was lump associated with pain 34.5%, only a few complained of pain alone 14.2%. The upper lateral quadrant of the right breasts were more commonly involved. FNAC were the most useful and most effective investigation; sensitivity 89.6%, specificity 87.8% and accuracy 94.2%. USG and mammography were additional tools to FNAC and clinical evaluation.

Breast self-examination and education to females is very important in cases of benign breast tumors as well, as they are common source of anxiety and worry. Reassurance is the first step in treating benign breast lesions. Hence, in a country like ours, education regarding breast self-examination and proper follow up is highly recommended so that early treatment is sought.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Selvakumaran S, Sangma MB. Study of various benign breast diseases. Int Surg J 2017;4:339-43.