

Breast Fibroadenomas in a Tertiary Care Hospital: A Prospective Observational Study

S Vinoth Kumar¹, G Nirmal Kumar², T Vinotha³, Heber Anandan⁴

¹Senior Assistant Professor, Department of Surgery, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India, ²Assistant Professor, Department of Surgery, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India, ³Assistant Professor, Department of General Medicine, Tirunelveli Medical College, Tirunelveli, Tamil Nadu, India, ⁴Senior Clinical Scientist, Dr. Agarwal's Healthcare Limited, Chennai, Tamil Nadu, India

Abstract

Introduction: Breast cancer is a well-known type of cancer in the women both in the developed as well as in developing countries. The incidence of breast cancer is increasing in the developing country due to increase life expectancy, increase urbanization and adoption of western lifestyle. The majority of breast lumps are benign, but finding a breast lump understandably creates considerable patient anxiety. Some benign tumors can become malignant but it's rare.

Aim: To study the incidence of breast lumps, effectiveness of conservative management in the selected cases of fibroadenoma breast, incidence of various lumps with respect to breast segments and to study the bilaterality of the benign breast lumps.

Materials and Methods: Patients with breast lumps were included in the study. Ethical committee clearance and informed consent from the patients were obtained. The site of lump and extend of disease was recorded. Fine needle aspiration cytology was done routinely and selected cases submitted for excision biopsy.

Results: The most common lesion was fibroadenoma breast which was present in 35 patients (35%), 25 patients (25%) reported to have fibroadenosis, and 8 patients (8%) had giant fibroadenoma. In this study group, 70% of the patients attained menarche by the age of 13.

Conclusion: Although benign breast lesions are more common among female population than malignant lesion, the frequency of breast cancer is increasing rapidly across the global. It is important to screen females at a younger age to detect early breast cancer.

Key words: Breast, Cancer, Female, Lump, Tumor

INTRODUCTION

The breast has always been a symbol of womanhood and the ultimate fertility. Human beings are classified as mammals because of the presence of "mamma" or the breast. Breast has a lot of importance even though it is a modified sweat gland not only for its lactating function but also for a cosmetic reason. It is the organ teased day in and day out by various hormones and it is the one which is influenced by various endocrinological challenges

posted on it.¹ Breast is one of the most puzzling areas of surgical diseases resulting from undue but understandable perception with carcinoma at the expense of benign conditions. Benign breast disorders are a heterogeneous group of lesions that clinically and radiologically span the entire spectrum of breast abnormalities.² Some benign disorders that mimics breast cancer need a biopsy or an excision to make this distinction. The breast or mammary glands are important for the survival of the newborn and thus of the species. Nursing of the young in the animal kingdom has many physiologic advantages for the mother, such as aiding postpartum uterine involution as well as for the neonate in terms of breast feeding of neonate and may have interfered with its physiologic role. It has become increasingly apparent that advantages of nursing are substantial for both mother and child.³ Until a few years ago, it was believed that a breast tumor should be excised and histologically examined to determine the pre-

Access this article online



www.ijss-sn.com

Month of Submission : 12-2016

Month of Peer Review : 01-2017

Month of Acceptance : 01-2017

Month of Publishing : 02-2017

Corresponding Author: Heber Anandan, No. 10, South By-pass Road, Vannarpetai, Tirunelveli - 627003, Tamil Nadu, India.
Phone: +91-9894067910. E-mail: clinicalresearch@dragarwal.com

operative assessment alone was associated with too much uncertainly now benign breast lump can be diagnosed with the help of fine needle aspiration cytology (FNAC), Trucut biopsy, ultrasonography (USG), and assure the patients of its benign course.⁴

Aim

To study the incidence of breast lumps, effectiveness of conservative management in the selected cases of fibroadenoma breast, incidence of various lumps with respect to breast segments and to study the bilaterality of the benign breast lumps.

MATERIALS AND METHODS

This prospective observational study was conducted in the Department of Surgery, Government Rajaji Medical College Hospital. Patients with breast lumps were included in the study. Ethical committee clearance and informed consent from the patients were obtained. The site of lump and extend of disease was recorded. FNAC was done routinely and selected cases submitted for excision biopsy. In this study, only benign clinical lumps were discussed in detail. Male patients also included.

RESULTS

A total of 100 patients were studied, 91% of female patients followed by 9% of male patients. 40% of female patients are in 21-30 years followed by 37% in 31-40 years. 67% of male patients are in between 10 and 20 years (Figure 1 and Table 1).

The most common lesion was fibroadenoma breast which was present in 35 patients (35%), 25 patients (25%) reported to have fibroadenosis, and 8 patients (8%) had giant fibroadenoma (Table 2).

In this study group, 70% of the patients attained menarche by the age of 13. The general populating statistics show 13 years of age of menarche is around 41.2%, which is lesser than this study group. In this study, 25% of cases presenting with menstrual irregularities such as menorrhagia, dysmenorrhea, and scanty menstruation. Hence, there may be a role of ovarian hormones in the development of benign breast lumps (Table 3).

In this study group upper outer quadrant is more commonly affected, least common is lower inner quadrant. In this study, bilateral/unilateral ration of benign breast lumps 1:2.3, bilateral lumps in male breast (18%), bilateral lumps in female breast (29%) (Table 4).

Among the 14 cases of nipple discharge, 2 cases were duct ectasia, and 12 cases were fibroadenosis; the discharge was subjected for cytological study, no malignant cell found in the cytology. Among 36 patients, cyclical and non-cyclical pain in assessed with Cardiff breast pain chart, 25 patients with cyclical pain are responded well to E.P.O. and hormonal treatment (Table 5).

All cases of breast lumps were subjected to FNAC, and the results were analyzed and correlated with clinical exam and ultrasonogram. Since only benign cases are taken for our study, after histopathological exam only 3 cases are found to be malignant. In this study, we have the sensitivity of 97%.

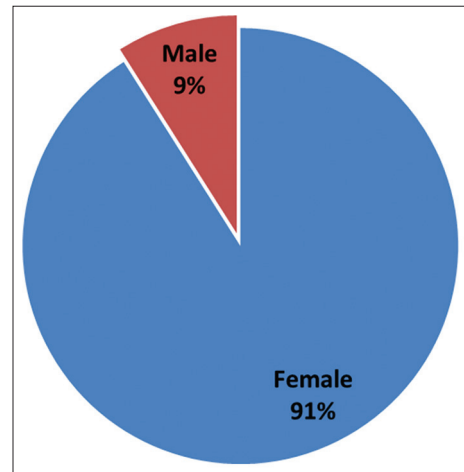


Figure 1: Gender distribution of study patients

Table 1: Age distribution of patients with benign breast lumps

Age in years	Male	Female
10-20	6	11
21-30	2	36
31-40	1	33
41-50	0	10
51-60	0	1
Total	9	91

Table 2: Distribution of various types of breast lumps

Types of breast lump	Number of patients
Fibroadenoma	35
Fibroadenosis	25
Giant fibroadenoma	8
Cystosarcoma phylloides	6
Gynecomastia	9
Breast cyst	8
Tramatic fat necrosis	5
Antibioma	2
Duct ectasia	2

Table 3: Relationship various benign breast lumps with reproductive age group in females

Lesions	Menstruation <40 years	Perimenopausal 40-50 years	Post-menopausal 50 years
Fibroadenoma	30	5	-
Fibroadenosis	25	-	-
Giant fibroadenoma	7	1	-
Cystosarcoma phylloids	4	2	-
Breast cyst	6	2	-
Traumatic fat necrosis	3	-	-
Antibioma	2	-	-
Sclerosing adenosis	2	-	-
Duct ectasia	1	-	1
Total	80	10	1

Table 4: Incidence of various lumps with respect to different breast segment

Quadrant	Percentage (%)
Upper outer	37
Upper inner	12
Lower outer	10
Lower inner	8
Central	15
More than one quadrant	18
Total	100

Table 5: Distribution of clinical features

Symptoms	Number of cases
Lump	100
Nipple discharge	14
Pain	36

In our study, it has a very limited role, only four doubtful cases with suspicion of malignancy core cut biopsy done, in all cases' results are only benign breast lump. USG is very useful in female <35 years and in very large breast, it aid in the aspiration of breast cysts, in our study of 8 breast cyst USG is used in aspiration, USG is also useful in the diagnosis of doubtful breast lumps.

About 15 cases if fibroadenoma are treated conservatively and followed up for 2 years. For other cases excision biopsy done, giant fibroadenoma was excised. Only one case of fibroadenoma, which was previously diagnosed as benign, is turned to be malignant. Some cases of fibroadenosis undergone excision biopsy, others treated medically. For 2 cases of duct ectasia Hadfield's surgery done. Breast cyst is aspirated and followed up for 6 months, there is no recurrence. Nine gynecomastia cases which are all idiopathic are treated by Webster's procedure. Cystosarcoma phylloides are treated with excision, with 1 cm margin of normal breast tissue, two cases of malignancy after histopathological examination is treated accordingly, for two cases of traumatic fat necrosis excision biopsy done.

DISCUSSION

Although benign breast lumps are most common than malignant ones, females who present to the private medical center with complaints of breast lump suffer anxiety due to the fear of it turning out to be a malignant lesion. Thus, it is important to investigate these patients according to standard protocols to relieve their stress.⁵ Most breast lumps are not breast cancer, there is always a chance that a lump may be breast cancer, even in younger women. Khan *et al.* also noted in their study that lump in the breast was more common on the left side with 57.5% of their patients than on the right side, i.e., 42.5%.⁶

Biopsy was performed to all the patients reporting with breast lump. As shown in Table 2, the study is found to be the most common lesion was fibroadenoma breast which was present in 35 patients (35%), 25 patients (25%) reported to have fibroadenosis, and 8 patients (8%) had giant fibroadenoma. Fibroadenoma is one of the most common lesions among young woman. It is a breast lump where tissues and ducts around a milk producing lobe grow and thickens over it. Fibroadenomas are benign tumors made up of both glandular breast tissue and stromal (connective) tissue.⁷

Internationally, Jamal reported that fibroadenoma was the most common breast lesion in their population in Jeddah, Saudi Arabia where it was present in 47% of the females.⁸ Fibroadenoma is not common breast lesion everywhere because, in Nepal, it was the least common lesion, present in 21.6% of the female patients.⁹ The use of birth control pills before age 20 is linked to the risk of fibroadenomas. Women with fibroadenomas have an increased risk of breast cancer which is about 11/2 to 2 times the risk of women with no breast changes.⁷

Fibrocystic disease is a condition in where it occurs due to thickening of tissue or cyst and it is mostly benign. In this study, fibrocystic disease is the second most common lesion to fibroadenoma with 17 patients (34%). Whereas

Lakhana and Khalid reported fibrocystic disease to be more common in their study.¹⁰

CONCLUSION

Although benign breast lesions are more common among the female population than malignant lesion, the frequency of breast cancer is increasing rapidly across the global. It is important to screen females at a younger age to detect early breast cancer. Internationally mass awareness should be created regarding detection of early breast cancer and to foster knowledge about the medical and socioeconomic implications of a common public health issue.

REFERENCES

1. Cold E, Health E, Disease P, Management S, Condition S, Problem S, *et al.* Breast Lumps-Topic Overview. WebMD; 2017. Available from: <http://www.webmd.com/women/tc/breast-lumps-topic-overview#1>. [Last accessed on 2017 Feb 16].
2. Haas JS, Kaplan CP, Brawarsky P, Kerlikowske K. Evaluation and outcomes of women with a breast lump and a normal mammogram result. *J Gen Intern Med* 2005;20:692-6.
3. Mitchell RS, Kumar V, Abbas AK, Fausto N. Robbins Basic Pathology. 8th ed. Philadelphia, PA: Saunders; 2007. p. 739.
4. McPhee S, Lange PM. Current Medical Diagnosis & Treatment. 1st ed. New York: McGraw-Hill Medical; 2009.
5. Ahmed I, Nazir R, Chaudhary MY, Kundi S. Triple assessment of breast lump. *J Coll Physicians Surg Pak* 2007;17:535-8.
6. Khan ZM, Jamal S, Khaliq T. The frequency of various causes of breast lumps in females presenting to surgical OPD in a tertiary care hospital. *Ann Pak Inst Med Sci* 2013;9:26-9.
7. Non-cancerous Breast Conditions; 2015. Available from: <https://www.old.cancer.org/acs/groups/cid/documents/webcontent/003180-pdf.pdf>, <http://www.cancerorg>. [Last accessed on 2017 Feb 08].
8. Jamal AA. Pattern of breast diseases in a teaching hospital in Jeddah, Saudi Arabia. *Saudi Med J* 2001;22:110-3.
9. Kumar R. A clinicopathologic study of breast lumps in Bhairahwa, Nepal. *Asian Pac J Cancer Prev* 2010;11:855-8.
10. Lakhana N, Khalid F. Morphology of breast lumps; A retrospective study. *J. Pak Inst Med Sci* 2002;13:631-4.

How to cite this article: Kumar SV, Kumar GN, Vinotha T, Anandan H. Breast Fibroadenomas in a Tertiary Care Hospital: A Prospective Observational Study. *Int J Sci Stud* 2017;4(11):176-179.

Source of Support: Nil, **Conflict of Interest:** None declared.