

# Fibroadenoma of Breast: Our Experience

Anil Kumar Gupta<sup>1</sup>, Deepesh Kumari Agarwal<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of General Surgery,

<sup>2</sup>Assistant Professor, Department of Obstetrics and Gynecology,  
Dungarpur Medical College & Hospital, Dungarpur, Rajasthan

Corresponding Author: Dr. Deepesh Kumari Agarwal

## ABSTRACT

**Objectives:** Fibroadenomas are the most common benign tumor of the female breast constituting approximately one-third of all benign breast lesions. Early diagnosis and treatment can relieve anxiety associated with non malignant conditions of breast.

**Materials & methods:** The study was conducted in the department of general surgery at Pacific Institute of Medical Sciences over a period of 2 years from May 2016 to May 2018. Patients presenting with mastalgia or breast lump were examined and evaluated. Thorough investigations were done to confirm the diagnosis. All cases which were proven fibroadenoma were included in the study. A total of 40 unselected cases were studied fully and is presented here.

**Results:** All the cases were females with maximum number of cases in 3<sup>rd</sup> and 4<sup>th</sup> decade of life. Most of the patients were married (72.5%). Most of the patients (47.5%) were of middle socioeconomic status. 52.5% of cases belonged to rural background and 47.5% were from urban background. Most of the fibroadenomas were found in the right breast (57.5%). Outer upper quadrant was the most commonly involved quadrant (45%). The size of tumours varied from 1 to 20 cms with 62.5% cases between 3-5 cms. Seven patients (17.5.0%) of the cases were managed conservatively and 82.5% underwent excision with no major complication.

**Conclusion:** Fibroadenomas are one of the most common benign diseases of breast, predominantly found in women of 2<sup>nd</sup> and 3<sup>rd</sup> decade, with varying number and size in all quadrants of breast. Treatment of choice is surgery. Early diagnosis and treatment can relieve anxiety associated with non malignant conditions of breast.

**Key Words:** Fibroadenoma, Breast lump, Phylloids

## INTRODUCTION

Fibroadenoma are the most common tumors clinically and pathologically in adolescent and women of child bearing age group; arising from the epithelium and stroma of the terminal duct-lobular unit of breast. <sup>(1)</sup> An estrogen dependency has been suggested for the growth of fibroadenomas. <sup>(2,3)</sup>

Fibroadenoma is a biphasic benign stromal tumors arising from monoclonal intralobular stromal mesenchymal cells and reactive polyclonal hyperplasia of

intralobular ductular and acinar epithelium with subsequent compression of ducts and acini into slit like spaces resulting in final picture of FA. <sup>(4-8)</sup>

Juvenile fibro-adenoma occurs in adolescent girls. But it does not turn into phylloides tumour or carcinoma. Complex fibro-adenoma is a condition having typical fibro-adenoma with fibrocystic changes like apocrine metaplasia, cyst formation, sclerosing adenosis. 15% of proven fibro-adenomas are complexed. It occurs in older age groups; vocationally it may turn into

malignancy unlike usual fibro-adenomas. Core-biopsy is needed to confirm the condition. 10-15% will increase in size progressively. It does not occur after menopause. Unless women are on hormones.

We have studied the clinico-pathological features of fibroadenoma in a prospective study of patients attending surgical outpatient as well as in Gynecology department at Pacific institute of medical sciences, Udaipur, Rajasthan.

**MATERIALS AND METHODS**

The study was conducted in the department of general surgery at Pacific Institute of Medical Sciences over a period of 2 years from May 2016 to May 2018. Patients presenting with mastalgia or breast lump were examined and evaluated. The profile of patients were recorded in Performa which included age marital status, rural or urban background, duration of symptoms, pre menstrual and post menstrual symptoms, number of lumps, size and location of lumps. All cases underwent fine needle aspiration cytology (FNAC) and

specimens were sent for histopathological examination after excision. All cases which were proven fibroadenoma were included in the study. A total of 40 unselected cases were studied fully and is presented here.

**RESULT**

All the cases were females with maximum number of cases in the age group 20-29 (37.5%) followed by age group 30-39 (25%). Most of the patients were married (72.5%).

47.5% patients were of middle socioeconomic status while cases with upper and lower socioeconomic status were 37.5% and 15% respectively.

52.5% of cases belonged to rural background and 47.5% were from urban background.

Most of the fibroadenomas were found in the right breast (57.5%) with 10% cases presenting bilaterally. Outer upper quadrant was the most commonly involved quadrant (45%) followed by outer lower quadrant (22.5%).

**Table.1 Characteristic features of fibroadenoma in present study**

S.No.	Characteristic feature	Subgroups	Numbers	Percentage
1.	Age Group (in years)	10-19	8	20
		20-29	15	37.5
		30-39	10	25
		40-49	5	12.5
		50-60	2	5
2.	Marital Status	Married	29	72.5
		Unmarried	11	27.5
3.	Socioeconomic status	Upper	15	37.5
		Middle	19	47.5
		Lower	6	15
4.	Background	Rural	21	52.5
		Urban	19	47.5
5.	Side	Right	23	57.5
		Left	13	32.5
		Bilateral	4	10
6.	Location(Quadrant)	Outer upper	18	45
		Outer lower	9	22.5
		Inner upper	5	12.5
		Inner lower	3	7.5
		Central	3	7.5
		Multiple	2	5
7.	Size (in cm)	≤ 2	11	27.5
		3-5	25	62.5
		> 5	4	10
8.	Treatment	Surgery	33	82.5
		Conservative	7	17.5

The size of tumours varied from 1 to 20 cms with 62.5% cases between 3-5 cms.

Giant fibro-adenoma >5 cms were found in 10%. Seven patients (17.5.0%) of the cases

were managed conservatively and 82.5% underwent excision with no major complication. All the patients were reviewed after a follow up period of 6 months and no recurrence was seen during this period. (Table-1)

## DISCUSSION

Fibroadenomas can occur in women of any age, but the peak incidence is during the second and third decades of life. <sup>(9-11)</sup> However some studies show rising rate in second decade. <sup>(12-14)</sup> The reason may be due to hormonal dependency, participation in lactation and involution at menopause which is a possible contribution to lump formation and evolution. <sup>(15)</sup>

In present study, maximum number of cases was of age group 20-29 (37.5%) followed by age group 30-39 (25%). The results are similar to studies by Bewtra <sup>(7)</sup> and *et al.* <sup>(16)</sup> Bilateral breast Fibroadenomas were perceived in 10% of cases comparable to a study by Onuigbo. <sup>(17)</sup> Right side of the breast was affected in 57.5% and left side in 32.5% analogous to a study by Vijaykumar *et al.* <sup>(4)</sup> and Kumar. <sup>(5)</sup> Predominant right sided the involvement of breast may be due to physical and social grounds. <sup>(5)</sup> However, side of the breast involved has no clinical or prognostic significance.

In present study, fibroadenomas were found to be more common in people of middle socioeconomic status (47.5%) than of upper socioeconomic status (37.5%). Similarly, we found 52.5% cases from rural background and 47.5% of cases from urban background. These findings are against the results of various other studies <sup>(18-20)</sup> done in past in which it was found that fibroadenomas are more common in people with upper socioeconomic status and in urban population. This disparity can be because of less number of patients in our study and location of our tertiary hospital which is near to rural area.

Fibroadenoma tends to occur more frequently among married woman than unmarried women.

The possible reason may be due to early marriage and parity.

Most of the fibroadenomas were found in the right breast (57.5%) with 10% cases presenting bilaterally. This is in contrast to study done by Canny et al that incidence of breast lesions is higher in the left breast than in the right. <sup>(21)</sup> Besides outer upper quadrant forms the most common location of fibro-adenoma (45%) which is accordance to findings of Foster O et al. <sup>(22)</sup>

Size of the fibroadenoma in most of the cases was between 3 to 5 cm. very few (17.5%) cases were treated conservatively while surgical excision was the preferred treatment in majority of cases (82.5%). Simple excision was done in majority of cases studied during the period and simple mastectomy for giant fibroadenoma. The Fibroadenoma Excision Through Periareolar Incision (FETPI) technique offers the advantage of an incision in an aesthetically acceptable area. <sup>(23)</sup> The scar can be camouflaged by the dark color of the areolar skin and the roughness of the areolar glands. The periareolar scar is esthetically superior to the overlying scar The FETPI technique is indicated for patients with the following characteristics: an areola diameter greater than 3.5 - 5.0 centimeters (cm), a distance from the outer margin of the mass to the nearest areola's edge  $\leq 5.0$  cm, the largest diameter of clinically diagnosed palpable Fibroadenomas  $\leq 3.0$  cm, and age  $\leq 35$  years.

Though none of our cases presented with recurrence or carcinoma within fibroadenoma specimen, Breast cancer risk for fibroadenoma has been estimated at 3.1 annual incidence per 1000, person-year rate, and the relative cancer risk estimated at 7.0. <sup>(24,25)</sup>

## CONCLUSION

Fibroadenomas are one of the most common benign diseases of breast, predominantly found in women of 2<sup>nd</sup> and 3<sup>rd</sup> decade, with varying number and size in all quadrants of breast. Though conservative management or observation can be followed

in young women, surgical excision by a circumareolar incision is preferred in large tumors and patients older than 35yrs to avoid missing an occult malignancy within the fibroadenoma.

**Conflict of interest:**

No conflicts of interest exist for these authors. No relevant financial relationship exists between the authors and procedures or products used in this manuscript.

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