



## RETROSPECTIVE CYTOLOGICAL STUDY OF FIBROADENOMA CASES IN A TERTIARY CARE HOSPITAL CHANDRAPUR

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**ABSTRACT** **Background:** Fibroadenomas are the most common benign breast diseases in country. Aim of study is to determine some demographic factors & the clinical summary of fibroadenoma cases in our tertiary care hospital.

**Material&Methods:** A retrospective cytological study of fibroadenoma for period of 2years from medical records of January2017 to December2018.

**Results:** All 142 cases were females. Most common age group was 21 to 30 years (50%) followed by 31 to 40 years (38%). Right breast was commonly involved and most fibroadenomas were confined to upper and outer quadrant.

**Conclusion:** FNAC of breast is economic, safe, and highly accurate method for diagnosis of breast lump preoperatively to avoid undue surgery and inconvenience during biopsy. Health education, Breast self-examination and FNAC is recommended for early diagnosis and management.

**KEYWORDS :** Retrospective, fibroadenoma, FNAC

### INTRODUCTION:

Fibroadenomas are one of the main benign diseases of the breast characterized by an admixture of stromal and epithelial tissue. Although more common in young women, it is seen in women of any age including those who are postmenopausal.<sup>(1)</sup> In the adolescent population, the overall incidence of fibroadenoma is 2.2%.<sup>(2)</sup> They account for 68% of all breast masses and 44%–94% of biopsied breast lesions.<sup>(2)</sup> It can rarely transform into cancerous condition also. Fine needle aspiration cytology (FNAC) and radiological imaging-mammography and ultrasonography as complements to clinical examination (triple test) have become the standard approach to investigations of palpable breast lump India.<sup>(1,3)</sup> Early diagnosis and treatment help preventing anxiety associated with nonmalignant conditions of the breast. FNAC plays a vital role in diagnosing fibroadenomas. Unlike typical lumps from breast cancer, fibroadenomas are easy to remove, with clearly defined edges.<sup>(3,4)</sup> This study has been done to know some demographic and clinical characteristics of fibroadenoma cases which is important for early diagnosis and management.

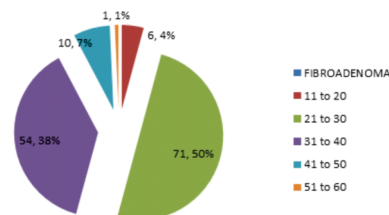
### MATERIALS AND METHODS:

It was a retrospective record based study, performed in Central pathology laboratory, Government Medical College & Hospital, Chandrapur. Required institutional ethical committee approval was obtained for the study. Study Population included breast fibroadenoma cases from medical records **January 2017 to December 2018**. By using universal sampling method 142 patients were included in the study from medical records of 2 years. Reports having major typographical errors were excluded from the study. Study Procedure involves case reports having patient age and sex, history and clinical examination, breast cytology sampling technique, and conclusive breast cytology diagnosis is included in the study. Informed consent was taken from patients before sample collection. Samples from the patients were collected by using 20-22 gauge needle. Aspirated material was expressed on a clean glass slide using 20 cc syringe. Another slide was placed on the material and spread by pulling apart to prepare a smear. The slide was immediately transferred to jar containing isopropyl alcohol. Staining was done with Haematoxylin and Eosin, Pap, May Grunwald Giemsa stain. All data was analysed using Microsoft Excel 2007 & SPSS.

### RESULTS AND DISCUSSION:

Total fibroadenoma cases from 2years duration were recorded as 142 in present study; out of which all were females. **Ajitha M B et al**<sup>(5)</sup> conducted a study in Bangalore on fibroadenoma patients in which all 210 cases were females. **A Mukhopadhyay et al**<sup>(6)</sup> performed a 5 year study in West Bengal on breast diseases all were female participants. **S Vinoth Kumar et al**<sup>(7)</sup> carried out a study in Tamil nadu in which 91%

fibroadenoma patients were females. **S Durge et al**<sup>(8)</sup> have done a study in Maharashtra where all fibroadenoma cases were female patients. Above mentioned study population is similar to present study.



**Fig1: Age group wise distribution of fibroadenoma cases**

Fig 1 shows age group wise distribution of fibroadenoma cases in present study. Maximum cases 71(50%) belonged to age group 21 to 30 years followed by 54(38%) 31 to 40 years and 10(7%) cases were of age group 41 to 50 years. Only 6(4%) cases belonged to 11 to 20 years and 1(1%) case belonged to 51 to 60 years age group. **A Mukhopadhyay et al**<sup>(6)</sup> performed a 5 year study in West Bengal on breast diseases the mean age of benign lesion was 29 years in their study. **S Vinoth Kumar et al**<sup>(7)</sup> carried out a study in Tamil nadu in which 40% of female patients were in 21-30 years followed by 37% in 31-40 years. **Abhijit MG et al**<sup>(9)</sup> reported commonest age group as 20-40years, and mean age as 28.6 years. **S Durge et al**<sup>(8)</sup> have conducted a study in Maharashtra where commonest age group for fibroadenoma mentioned was 20-29 years. These reported study findings are consistent with present study.

Side of breast fibroadenoma	Number (percentage)
Right breast	110(77%)
Left breast	22(16%)
Bilateral	10(7%)
Total	142(100%)

**Fig:2 Side of breast involved in fibroadenoma cases**

Fig:2 indicates that right breast was involved among 110(77%) cases of fibroadenoma whereas left breast was involved among 22(66%) cases and 10 (7%) cases were bilateral involving both breasts. **Ajitha M B et al**<sup>(5)</sup> conducted a study in Bangalore on fibroadenoma patients in which all 210 cases were females out of which 103(49%) cases were involving right breast. **P Rangaswamy et al**<sup>(10)</sup> conducted clinical study in Tamil Nadu on fibroadenoma in which out of 80 cases 40(50%) cases of fibroadenoma involved right breast. **P Sathasivam et al**<sup>(11)</sup> conducted a study in Malaysia where only 19% of fibroadenoma cases involved right side, this is in contrast to our study

finding. **S Durge et al**<sup>(8)</sup> have conducted a study in Maharashtra where right breast (58%) was more commonly involved for fibroadenoma cases. **Brajesh Kumar et al**<sup>(12)</sup> conducted a study in Dehradun where most of benign breast diseases (52%) were confined to right breast. Our study finding is consistent with most of the above mentioned studies.

Quadrant involved	Number (percentage)
Upper outer	79(56%)
Upper inner	32(23%)
Lower outer	3(2%)
Lower inner	18(13%)
Central	5(3%)
Multiple	5(3%)
total	142(100%)

**Fig:3 Breast quadrant wise distribution of fibroadenoma cases**

Fig 3 denotes maximum 79(56%) cases of fibroadenoma were confined to upper outer quadrant of breast followed by 32(23%) in upper inner quadrant. 3(2%) were in lower outer, 18(13%) were in lower inner quadrant and 5(3%) each in central and multiple quadrants. **Ajitha M B et al**<sup>(5)</sup> conducted a study in Bangalore on fibroadenoma patients in which all 210 cases were females out of which maximum lumps 92(43%) were in upper outer quadrant. **Brajesh Kumar et al**<sup>(12)</sup> conducted a study in Dehradun where most of benign breast diseases (39%) were confined to upper outer quadrant. **S Vinoth Kumar et al**<sup>(7)</sup> carried out a study in Tamil nadu in which maximum (37%) fibroadenomas were confined to upper outer quadrant. **Sandeep Kumar Goyal et al**<sup>(13)</sup> conducted a study on breast diseases in which most of the breast lumps (34.9%) involved upper outer quadrant. Above mentioned studies reported similar findings to present study.

Consistency of breast lump	Number(percentage)
Firm	136(96%)
Soft	6(4%)
Hard	0(0%)
Total	142(100%)

**Fig:4 Consistency wise distribution of fibroadenoma cases**

Fig 4 shows that maximum 136(96%) fibroadenoma were firm in consistency and 6(4%) were soft in consistency and none were hard in consistency. **S Durge et al**<sup>(8)</sup> have conducted a study in Maharashtra where maximum 91 (82%) fibroadenomas were firm in consistency. **S Sharma et al**<sup>(14)</sup> reported a case of fibroadenoma which was giant and firm in consistency. **Felecia Cerrato et al**<sup>(15)</sup> mentioned in their article that most of the fibroadenomas presents with firm consistency. Most of these study finding result is consistent with present study.

#### CONCLUSION:

Fibroadenomas are the most common benign breast lesion with most common age group of presentation was 21 to 30 years (50%) followed by 31 to 40 years (38%). Right breast was commonly involved and most fibroadenomas were confined to upper and outer quadrant. FNAC serves as a rapid and economical tool for diagnosis of palpable breast lesions because of the cytopathological examination of these lesions before operation or treatment serves as an important diagnostic modality. Health education, Breast self-examination and FNAC is recommended for early diagnosis and management.

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