*Original Research Article*

# Fine Needle Aspiration Cytology of Palpable Breast Lump: A Study of 2 Years

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## Abstract

*Obective*: Breast lumps constitute a significant proportion of surgical cases in women of both developed and developing countries. It is needed to distinguish benign lumps from malignant preoperatively for definite treatment There is wide variety of breast pathology. Epidemiological studies reveal wide disparities in the frequency and distribution of breast ailments across the world. *Material & Methods*: This study includes a total 250 female patient presented with palpable breast lump and undergone for fine needle aspiration cytology in department of pathology jhalawar medical college. *Results*: Total 250 patients were presented with breast lump out of which 195 (78%) were benign and 55 (22%) were malignant on cytology. This study shows age range of the patients was from 11 to 70 years. Most of the patients were in the range of age 31 to 50 years.

**Keywords:** Epidemiological studies; Benign Lumps; Malignant.

## Introduction

Breast cancer is the leading cause of morbidity and mortality [1,2]. Breast lumps constitute a significant proportion of surgical cases in women of both developed and developing countries [3]. Epidemiological studies reveal wide disparities in the frequency and distribution of breast ailments across the world. When local breast disease distribution patterns are known, generalizations pertaining to diagnosis and management can be made with a reasonable degree of certainty [7]. In addition, resource allocation and planning can be better managed. This is particularly so in resource poor countries where a large population of individuals may not afford all the forms of diagnostic modalities available Among females, the distribution of pathology varies widely depending on age and geographical location. Benign lesions predominate at all ages accounting for 48.9% to 57% with a mean age of occurrence being 28.5 years [9,10,11,12]. Benign lesion prevalence rates can

peak 99% in those younger than 30 years [7]. Fibroadenoma is the most common. Malignancy or inflammatory lesions come second in frequency to fibroadenoma [2,6,11,12]. Benign diseases thus, constitute the major work load in any breast clinic, although some studies have shown that malignant conditions predominate [4,6], yet others have found inflammatory lesions to be the most common disease entity [13]. This study undertook to examine the pattern of breast pathology presenting at tertiary care center.

It is believed that such type of studies can throw a light on the commonest breast lesions in different age groups, and the information can be used in developing prevention programmes for different breast diseases with a clue to predisposing factors like age, sex, pregnancy, hormonal factors, genetic or environmental effects [4]. It is needed to distinguish benign lumps from malignant preoperatively for definite treatment [4,5]. There is wide variety of breast pathology. It has been postulated that Inflammatory breast disease and non proliferative breast disease do not increase the risk of cancer. Proliferative breast disease without atypia and with atypia confers mild and moderate risk respectively, whereas carcinoma in situ is associated with substantial risk [6]. There are different preoperative diagnostic modalities for breast pathology. Fine needle aspiration cytology (FNAC) is sensitive, simple, cost effective, less traumatic and rapid method.

## Materials and Methods

This study include all female patient presented with palpable breast lump and undergone for fine needle aspiration cytology in department of pathology jhalawar medical college from period of January 2016 to December 2017. benign and malignant all lesions are included in study.

## Results and Discussion

Total 250 case including benign 195 (78%) and 55 (22%) malignant lesion were included in study. Age group ranging from 10 to 70 years.

Table 1 shows Among all lesions fibroadenoma was most common lesion constitutes 39.2%, and second most common was duct carcinoma 16.4%. And rest other were fibrocystic disese 8.0%, granulomatous mastitis 7.6% mastitis 6.4% fibroadenosis 6.8%, duct ectasia 4.8%, galactocele 4.4%, carcinoma breast 4%, lobular carcinoma 10%, fat necrosis 0.8% and mucinous carcinoma 0.4% respectively (Figs. 1-4).

Table 2 shows Out of 195 benign lesion 98 (50.25%) were fibroadenoma, 20 (10.25%) were fibrocystic disease 19 (9.75%) were granulomatous mastitis, 17 were fibroadenosis, 16 were mastitis, 12 were duct ectasia, 11 galactocele, and 2 were fat necrosis.

Table 3 shows Among 55 malignant breast lesion highest load was contributed by duct carcinoma 74.54% breast, followed by carcinoma breast 18.18% which could not be categeoried further, 5.4% by lobular and 1.81% mucinous carcinoma respectively.

Table 4 shows that age range of the patients presented with lump was 10 to 70 years. Most of the patients were in 21 to 50 years. There was one case which presented during age of 4 year which is early thelarche. Higest peak was seen in age 21 to 30 (32%) year.

**Table 1:** Distribution of of all breast lesion with their Frequency

| S. No. | Diagnosis | Frequency | Percentage |
|--------|-----------|-----------|------------|
| 1 | Fibroadenoma | 98 | 39.2 |
| 2 | Duct carcinoma | 41 | 16.4 |
| 3 | Fibrocystic disease | 20 | 8.0 |
| 4 | Granulomatous mastitis | 19 | 7.6 |
| 5 | Mastitis | 16 | 6.4 |
| 6 | Fibroadenosis | 17 | 6.8 |
| 7 | Duct ectasia | 12 | 4.8 |
| 8 | Galactocele | 11 | 4.4 |
| 9 | Carcinoma breast | 10 | 4 |
| 10 | Lobular carcinoma | 3 | 1.2 |
| 11 | Fat necrosis | 2 | 0.8 |
| 12 | Mucinous carcinoma | 1 | 0.4 |

**Table 2:** Distribution of benign lesion with frequency

| S. No. | Diagnosis | Frequency | Percentage |
|---|---|---|---|
| 1 | Fibroadenoma | 98 | 50.25 |
| 2 | Fibrocystic disease | 20 | 10.25 |
| 3 | Granulomatous mastitis | 19 | 9.75 |
| 4 | Fibroadenosis | 17 | 8.71 |
| 5 | Mastitis | 16 | 8.20 |
| 6 | Duct ectasia | 12 | 6.15 |
| 7 | Galactocele | 11 | 5.64 |
| 8 | Fat necrosis | 2 | 1.02 |

**Table 3:** Distribution of malignant lesion with Frequency

| S. No. | Diagnosis | Frequency | Percentage |
|---|---|---|---|
| 1 | Duct caricinoma | 41 | 74.54 |
| 2 | Carcinoma breast | 10 | 18.18 |
| 3 | Lobular carcinoma | 3 | 5.45 |
| 4 | Mucinous carcinoma | 1 | 1.81 |

**Table 4:** Age group distributionof breast lesion with their frequency

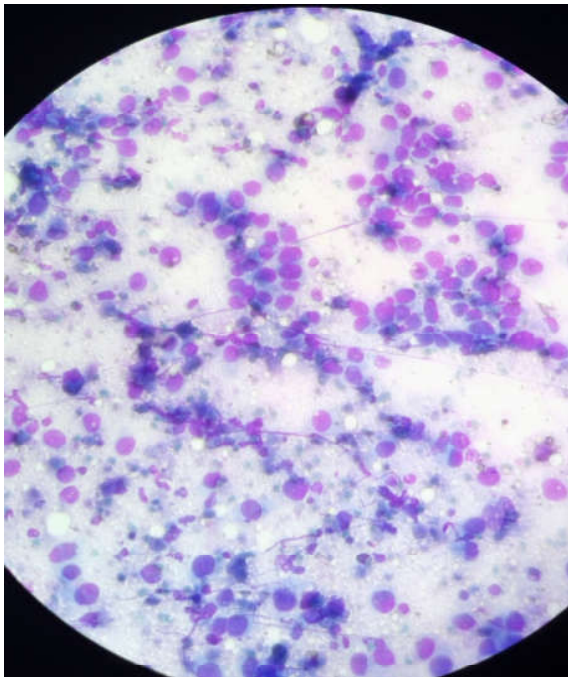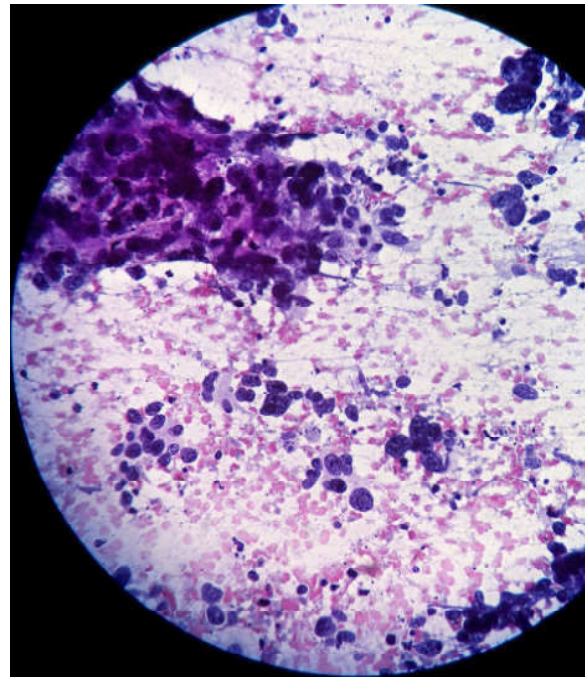| S. No. | Age Group | Freuency | Percentage |
|---|---|---|---|
| 1 | 0-10 | 1 | 0.4 |
| 2 | 11-20 | 25 | 10 |
| 3 | 21-30 | 80 | 32 |
| 4 | 31-40 | 65 | 26 |
| 5 | 41-50 | 60 | 24 |
| 6 | 51-60 | 7 | 2.8 |
| 7 | 61-70 | 12 | 4.8 |
| 8 | 71-80 | 0 | 0 |



**Fig. 1:** Lobular carcinoma
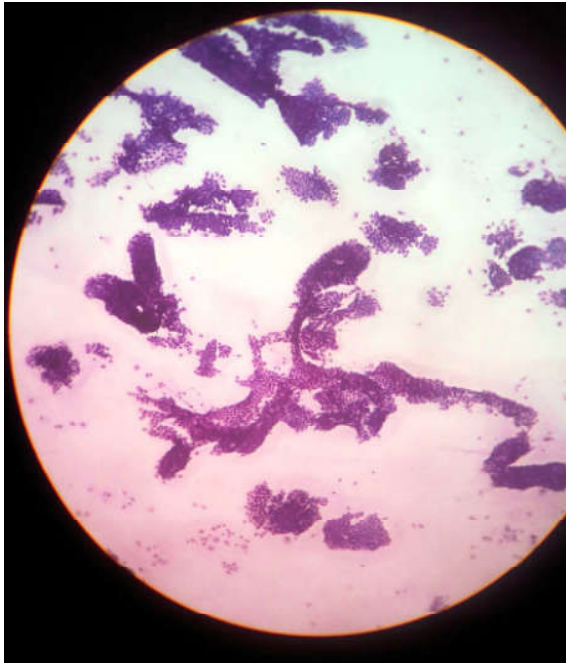


**Fig. 2:** Ductal carcinoma
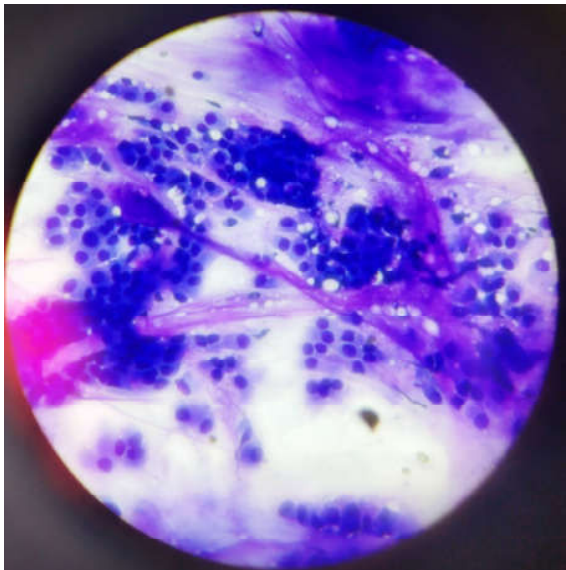
**Fig. 3:** Ductal pailloma



**Fig. 4:** Mucinous carcinoma

## Conclusion

Benign breast diseases are common in females. Fibro adenoma is the most common of all breast lesions followed by infiltrating duct carcinoma beast, other were fibrocystic disese, granulomatous mastitis, mastitis, fibroadenosis, duct ectasia, galactocele, carcinoma breast, lobular carcinoma, fat necrosis and mucinous carcinoma respectively.

Here in his study we focus on distribution of all breast lesion at tertiary care center. So that for management of patient these frequencies should be kept in mind of clinician and no patient get undetreatment and every patient presented with lump should have cytological evaluation by mean of FNAC.

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