



## Cytopathological study of male breast lesion

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### Abstract

**Background:** Male breast lesions are uncommon. Gynaecomastia is most frequently seen. Fine needle aspiration cytology (FNAC) is used as a primary diagnostic modality. 7

**Aims and Objective:** This study aims to evaluate cytomorphology of male breast lesions and their prevalence.

**Material and Method:** This is a 3 year retro-prospective study from October 2015 to 2018 in Department of Pathology G R Medical College, Gwalior. 90 FNACs were performed and data was summarized and compared statistically.

**Result:** Out of 90 cases, 89 were benign and one case was diagnosed as malignancy. Most frequent diagnosis was gynaecomastia (87.7%), followed by fat necrosis (3.3%). Granulomatous mastitis (1.1%), gynaecomastia with atypia (1.1%) and gynaecomastia with metaplastic changes (1.1%) was reported in one case each. In 3 cases FNAC was inconclusive.

**Conclusion:** Gynaecomastia is the most common male breast lesion. FNAC provides a reliable diagnosis in majority of the cases.

### Introduction

Fine needle aspiration cytology (FNAC) is well recognized diagnostic method in evaluation of breast masses. In this modern era as medical facilities and diagnostic methods are so much advance still FNAC play a major role in diagnosis of breast lesions in developing country<sup>[1]</sup>. FNAC in breast related pathology is very convenient method because it is an OPD procedure, cost

effective, time saving, low complication rate, high diagnostic accuracy and primary choice for preoperative diagnostic modality for breast lesions.

Gynecomastia is the well known pathology in the males; it is due to hyperplasia and hypertrophy of ductal and stromal component of breast which is related to increase estrogen and reduced androgenic hormone level. Major pathological

causes are liver cirrhosis, hyperthyroidism, renal failure, chronic lung disease, germ cell tumor and various drugs like spironolactone, digitalis, cimetidine etc. gynecomastia clinically seen behind the nipple but breast carcinoma located eccentrically in males. It is unilateral in most of cases but in puberty and hormone induced it may be bilateral<sup>[2]</sup>. Male breast carcinoma is an infrequent pathology represents less than 1% of all breast cancers<sup>[2-8]</sup>. it's incidence is seen in elderly male. Klinefelter syndrome is associated with increased risk of male breast carcinoma. In prostate cancer when we give estrogen therapy to patient sometime it may lead to breast carcinoma.<sup>[9]</sup> Like female breast carcinoma if male presented with bloody nipple discharge it is highly suspicious for carcinoma breast.

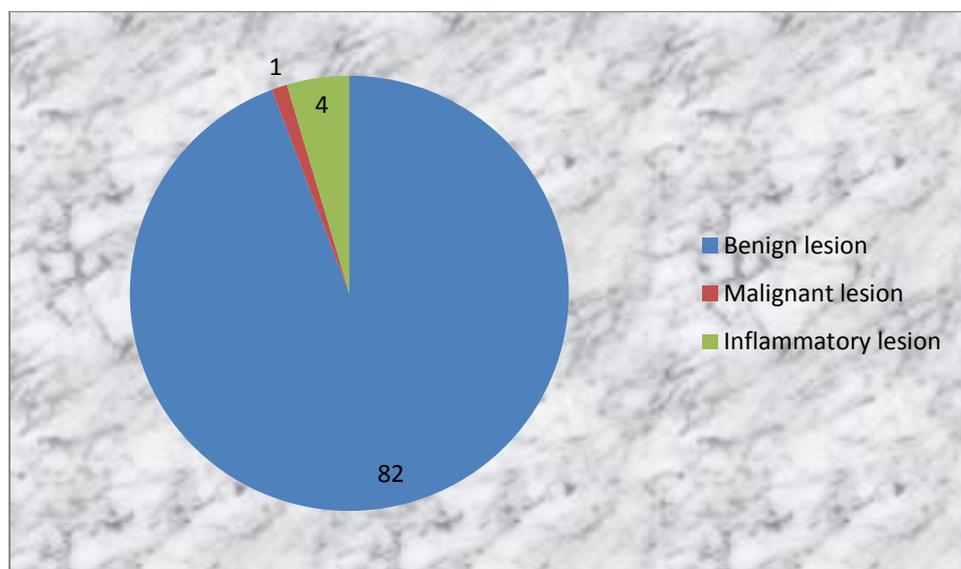
### Material and Method

This is 3 year retro-prospective study from October 2015 to October 2018. In this study we performed FNAC procedure on male breast palpable lump in cyto-pathology department of Gajra Raja Medical College. Aspirate material by using 23/25 gauge needle with 20 ml syringe and plunger. Prepared air dried smear, and stain it with leishman's stain. Wet smear fixed by 95% ethyl alcohol and subsequently stained with papanicolaou's stain. Prepared slides were examined under binocular microscope make

Olympus using objective lens of 10x (low power) and 40x (high power) with the eye piece of 5/10x. Diagnosis is categorized as benign lesion, inflammatory lesion, and malignant lesions. In malignant lesion we had done Cyto-histological correlation .Statistical analysis was done by standard methods for sensitivity, Specificity and diagnostic accuracy.

### Results

In this study we received 90 cases of male breast lump, in which 89 cases were benign and only one case is diagnosed as malignant. In 88 cases breast lump were unilateral, whereas in only 2 cases they were bilateral. Most common pathology in our study was Gynecomastia 79cases (87.7%), followed by fat necrosis 3 cases (3.3%), granulomatous mastitis 1 case (1.1%), Gynecomastia with atypia 1 case (1.1%), gynecomastia with metaplastic changes 1 cases (1.1%). one case is diagnosed as ductal cell carcinoma. Most common age group for Gynecomastia was between 11 to 40 years. Most common site of Gynecomastia was at subareolar region which was found in 70 cases. One case is diagnosed as malignant Ductal cell carcinoma which is a 55 year old male and its diagnosis was confirmed by histological correlation. In 3 cases FNAC were inconclusive.



**Figure No.1:** Categorization of lesions

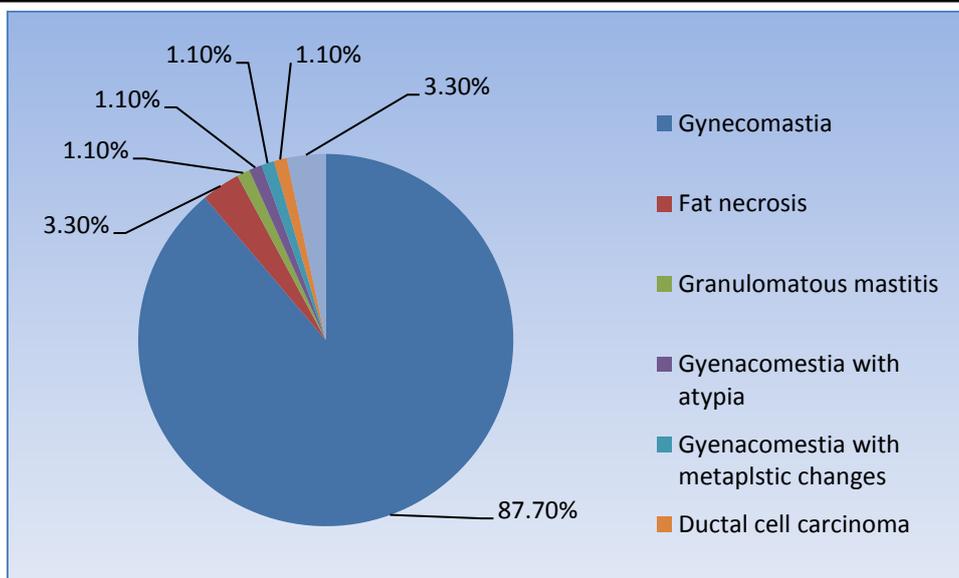


Figure No.2: Distribution of different lesions

Table No 1: Age distribution in gynecomastia patients

Age group	Number of cases
0-10 yrs	-
10-20 yrs	31
21-30 yrs	18
31-40 yrs	12
41-50 yrs	8
51-60 yrs	2
61-70 yrs	3
71-80 yrs	5

In our study the most common lesion was gynecomastia, in which smear is moderate to

highly cellular shows cohesive cluster of epithelial cells in monolayer sheets and dispersed cells also. In infiltrating breast carcinoma smear is highly cellular revealing small & large loose clusters of ductal epithelial cells arranged in discohesive fragments enlarged, hyper chromatic nuclei with prominent nucleoli & moderate amount of basophilic cytoplasm along with acini formation on the background of inflammatory cells, RBCs & necrosis. Plenty isolated cells showing large nuclei with prominent nucleoli.)

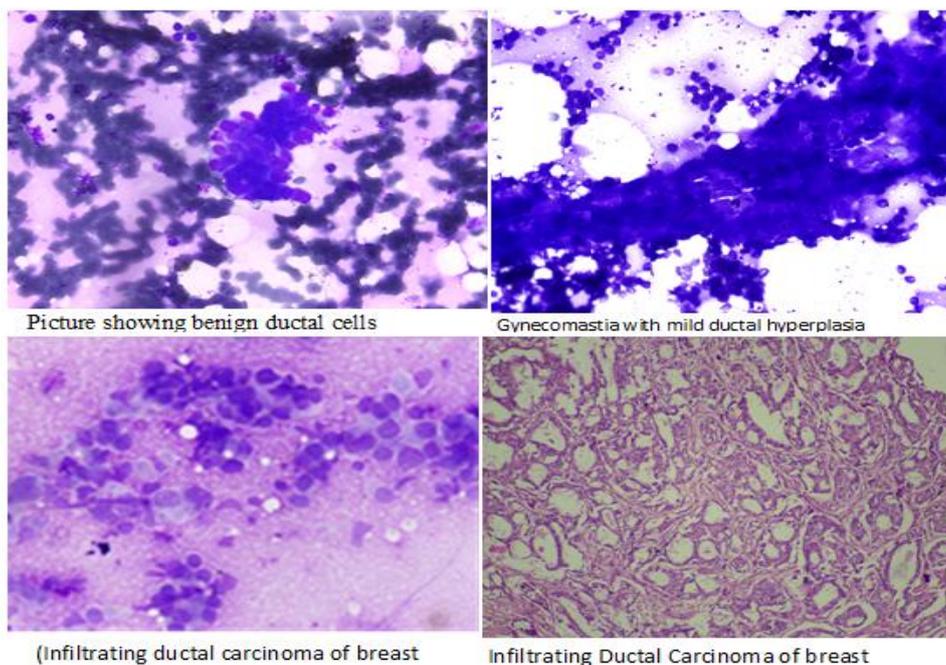


Figure No.3: Microscopic picture of different lesion

### Discussion

In our study we found that most common male breast lesion was Gynecomastia 79cases (87.7%), which incidence were similar to study of Singh et al<sup>[8]</sup>, and also we compare it with 63.63% by Jain et al<sup>[10]</sup>, 79.3% by Gill et al.<sup>[11]</sup>, and 72.27% by Ranbeer et al<sup>[12]</sup> studies.. Unilateral lesion in our study was 88 out of 90 cases while only 2 cases were bilateral, which was almost similar to study conducted by Das et al.,<sup>[13]</sup> and Martin-Bates et al.,<sup>[14]</sup>. Subareolar region was most common site for gynecomastia in our study. Only one case is reported as malignant lesion ductal cell carcinoma which incidence is very low also seen in study of Das et al<sup>[13]</sup>.

### Conclusion

In the study of 90 cases we concluded that FNAC is most reliable method to diagnosis of palpable breast mass. Most common male breast lesion is gynecomastia which seen in adolescence and adult population while incidence of malignant breast lesion is very low which seen in older individuals.

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