



FINE NEEDLE ASPIRATION CYTOLOGY SPECTRUM –IN MALE BREAST LESIONS

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ABSTRACT FNAC is highly accurate for palpable breast lesions but it is of much less oftenly used in male breast lesions. The purpose of the study was to study the cytomorphology of male breast lesion on FNAC. A Retrospective study was done in the department of cytology, Karnataka institute of Medical Sciences (KIMS, Hubli) from September 2018 to march 2020 , a one and half year study, with total of 25 male breast FNAC cases. The mean age of presentation was in the adolescence and in fourth decade, with right sided predominance (13 cases) also some with bilateral presentation. The study found that gynecomastia was the most common pattern (72%) followed by fibroadenoma. Only one case of suspicious for malignancy was reported. FNAC is a sensitive and specific diagnostic tool for the assessment of breast lesions in male patients which helps in reducing the, unnecessary biopsies for histopathologic evaluation, especially in case of benign breast conditions like benign cystic lesion and gynecomastia

KEYWORDS : FNAC, Male Breast Lesions, Gynecomastia, Breast Carcinoma

INTRODUCTION

FNA is highly accurate for palpable breast lesions and it delivers good results, especially in a multidisciplinary setting with on-site radiologists and pathologists.(1) However, it is used much less often in men, mainly because breast masses in males are less frequent. The incidence of breast carcinoma in men is low and this may affect the reliability of FNAC.(2).

Male breast is composed mainly of fat with few ducts and stroma with lack of Cooper's ligaments and lobular tissue, differentiating it from the female breast. Lobular development requires presence of significant amount of estrogen and progesterone, and hence, is not usually seen in the male breast. (3). Gynecomastia is the only specific benign disorder of the male breast that may be the target of aspiration. Aspiration biopsy of gynecomastia is performed only if there is a suspicion of carcinoma. (4)

Enlargement of the male breast often occurs briefly at puberty but usually recedes promptly.(5) Gynecomastia is defined as the enlargement of the male breast resulting from hypertrophy and hyperplasia of both glandular and stromal components. Development of gynecomastia before 25 years of age is usually related to hormonal pubertal changes, whereas development in later years may be caused by hormonally active tumors (Leydig cell tumor of testis, hCG-secreting germ cell tumors, lung carcinoma, or others), cirrhosis, or medications (digitalis, reserpine, phenytoin, and others).(6) Although histopathological examination is the gold-standard to distinguish gynecomastia from other lesions.

AIMS AND OBJECTIVES

- To assess importance of FNAC in the diagnosis of palpable male breast lesions
- To study in detail the cytomorphology of various male breast lesions

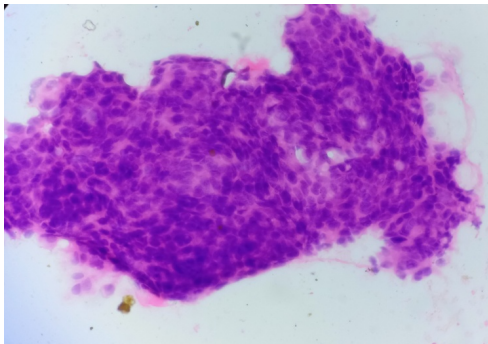


Figure 1: Gynecomastia

TABLE – 1: Distribution of cases according to Cytology diagnosis

CYTOLOGY DIAGNOSIS	NUMBER OF CASES
• Inadequate/ only fat	01
• Inflammatory lesion	01
• Benign diseases	
1 Gynaecomastia	18
2 Benign cystic lesion	01
3 Fibroadenoma	03
• Suspicious of malignancy	01
• Malignancy	00

MATERIALS AND METHODS

A Retrospective study done in the department of cytology, Karnataka institute of Medical Sciences (KIMS, Hubli) from September 2018 to march 2020 , a one and half year study .

FNA aspirates were performed with consent using 23-gauge needle and five ml syringe. Air dried and wet-fixed smears (95% ethyl alcohol) were made and stained with MGG and Haematoxylin and Eosin, Papanicolaou stain respectively.

Also relevant clinical data were retrieved from the records.

RESULTS AND DISCUSSION

The study includes 25 cases of male breast lesions. The mean age of presentation was in the adolescence less than 20 years, followed by in the 4th and 6th decade.

In view of laterality of lesion, showed that majority of them presented with right breast lump (13 cases) and 7 cases presented with left breast lump. Although bilateral lumps was also seen in 5 cases.

Clinical symptoms of about 19 cases had no pain or mass, 4 of them had mass with vague mild pain. Only one case had severe pain with mobile mass . One case had the history of on treatment of ART since 16 years of known case of ID syndrome presented with mass since 3months.

Kirana Pailoor et al and Martin Bates (2) study found a near total unilateral involvement in Gynecomastia similar to the present study

Chide PM et al (9) study also found that most common breast lesion were of benign conditions (79%) of which gynecomastia was the common cytology pattern, which is also seen in our present study where gynecomastia showed scant to moderate cellularity consisting of cohesive groups of benign ductal cells with stromal fragments and bare bipolar nuclei.(FIG 1)

The number of unsatisfactory cases ranged from 11.7% to 33.3% in

various studies. However, in present study unsatisfactory/inadequate for reporting was only one case 1%

CONCLUSION

FNAC is a sensitive and specific diagnostic tool for the assessment of breast lesions in male patients which helps in reducing the, unnecessary biopsies for histopathological evaluation, especially in case of benign breast conditions like benign cystic lesion and gynecomastia

REFERENCES:

1. Barbara S. Ducatman and Helen H. Wang. Breast. In: cytology diagnostic Principles and Clinical Correlates. 4th Edition. Philadelphia PA. Elsevier (2014), Pp233
2. Martin-Bates E, Krausz T, Philips I. Evaluation of fine needle aspiration cytology of the male breast for the evaluation of gynecomastia. *Cytopathology*. 1990;1:79-85
3. Chen L, Chandra PK, Larsen LH, et al. Imaging characteristics of malignant lesions of male breast. *Radiographics* 2006;26:993-1006.
4. Leopold G.Koss. Breast. In: Koss's diagnostic cytology and its histopathologic bases. 5th Edition. Lippincott Williams and Wilkins (2006). Pp1130
5. Darryl Carter. Breast. In: Sternberg's Diagnostic Surgical Pathology. 6th Edition. Wolter Kluwer.(2015)
6. Laura C. Collins. Breast In: Rosai and Ackerman's Surgical pathology. 11th Edition. Elsevier (2018). Pp1511
7. Russin VL, Lachowicz C, Kline TS. Male breast lesions: Gynecomastia and its distinction from carcinoma by aspiration biopsy cytology. *Diagn Cytopathol*. 1989;5:243-47.
8. Kirana Pailoor, Hilda Fernandes, Jayaprakash C S, Nisha J Marla, Murali Keshavas . Fine Needle Aspiration Cytology of Male Breast Lesions – A Retrospective Study Over a Six Year Period. *Journal of Clinical and Diagnostic Research*. 2014 Oct, Vol-8(10)
9. Pratik Mohanrao Chide, Suprita Nayak , Dinkar Kumbhalkar. Role of fine needle aspiration cytology in male breast lesion: 4 year observational study. *Int J Res Med Sci*. 2016 Sep;4(9):3945-3950