ORIGINAL RESEARCH PAPER

Pathology

CYTOMORPHOLOGICAL PATTERNS OF BREAST LESIONS DIAGNOSED ON FINE- NEEDLE ASPIRATION CYTOLOGY IN A TERTIARY CARE HOSPITAL

KEY WORDS: Cytology Breast, Benign, Malignant

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ABSTRACT

Background: Breast lump is most common presentation in most of the breast diseases. Fine-needle aspiration cytology (FNAC) is the immediate tool of the physician when first time patient is examined. It has been established as a highly accurate diagnostic technique over the past few decades. It is a rapid, reliable, and safe initial diagnostic tool used for both non-neoplastic and neoplastic breast lesions.
Objectives: To retrospectively analyse to all the female patients present with breast lump and to obtain the prevalence of benign and malignant female breast lesion and to evaluate the value of FNAC in diagnosis of breast lump.
Materials and Methods: This study was carried out on 210 patients who presented with palpable lumps in breast in the Department of Pathology, Shyam Shah Medical College Rewa, M.P. from Jan 2017 to December 2017 and were subjected to an FNAC procedure after obtaining a detailed history and conducting a general physical and local examination.
Results: Cytologically, age group evaluated were between 11-70 years old female, out of these 210 cases, maximum cases were in age group of 21-30 years i.e. 32.3%. 24 cases (11.4%) were unsatisfactory, 129 cases (61.4%) were benign and 26 cases (12.38%) were malignant. 4.28% cases were atypical and 1.42% were suspicious. The most common benign lesion in this study was fibroadenoma.
Conclusion: Diagnosis of breast lump based on FNAC should be practiced as first line diagnostic procedure due to its cost effectiveness and atleast in the areas under economic restrictions, thus maximizing the availability of effective health care to patients with breast lesion.

INTRODUCTION-

Today with increasing health and cosmetic awareness, breast lesions have been concealed by most of the population. Breast diseases must be dealt with care as they are not only medical problem but create social stigma as well. Spectrum of lesions of breast is wide ranging from non- neoplastic lesions to high grade carcinomas[1,2] According to GLOBOCAN 2018, in India, breast cancer was ranked 1st among other cancer in female as well as in both sexes, followed by cancer cervix, oral and lung cancer. [3] Breast lump is most common presentation in most of the breast diseases. Fine needle aspiration cytology is considered as Immediate tool, accurate diagnostic technique, it is a rapid, reliable, and safe initial diagnostic tool used. Relieves patient's anxiety and saves times and also Cost effective [1]

METHODOLOGY-

The present study was conducted in Department of Pathology, Shyam Shah Medical College Rewa,M.P. in the duration of 1 year, from Jan 2017 to December 2017. Total 210 patients were evaluated which came from OPD with proper requisition form. After obtaining a detailed history containing duration, progression, past, family and obstetrics history and conducting a general physical and local examination, which includes size, margins, consistency, mobility, overlying structure and contralateral breast examination. Bilateral lymphnode involvement was also assessed. FNAC was performed with 22 and 23 gauze needle. Slides were fixed, stained in H&E and Giemsa stain and evaluated.

RESULTS- Results were evaluated according to

- Age wise distribution
- Laterality
- Non neoplastic
- Neoplastic

1.Age wise distribution

TABLE 1-

Age	No of cases	%
11-20	60	28.5
21-30	68	32.3
31-40	44	20.9
41-50	24	11.4
51-60	7	3.3
61-70	7	3.3

1. Laterality- right breast 54.2%, left 40.47% and bilateral involvement in 5.2% cases.
2. Non neoplastic- maximum number of cases were of acute mastitis 6.4% followed by lactational changes 2.1%, chronic mastitis 1% and granulomatous mastitis 0.5%.
3. Benign- maximum cases were of fibroadenoma 58.6%, Fibrocystic 4.8%, atypical ductal hyperplasia 3.2% and adenosis 2.6%.
4. Cytological type-

TABLE 2-

Type	Cases	%
Benign	129	61.42
Atypical	9	4.28
Suspicious	3	1.42
Malignant	26	12.38
Unsatisfactory	24	11.42

DISCUSSION-

In our present study, FNAC was done in 210 cases. Age of patient- The most common age group affected in our study was 21-30 years followed by 11-20 years. Similar findings were there in study done by Farkhandaand [4] and Godwin et al [5]. Haque et al [6] showed 30-40 years age group most common.

In laterality in present study, maximum cases were in right breast same as Chandanwale S et al [7] whereas Muddegowda PH et al [8] showed left breast involvement most common.

Comparing according to various cytological types with other studies shows following findings-

TABLE 3-

Cytological type	Present study 210n (2018)	Venkatramanababu P 92016) 270n [9]	Palak modi (2014) 107n [10]	Neha mahajan 92013) 106n [11]	Bukhari et al (2010) 425n [12]
Benign	129 (61.42%)	191 (70.7%)	64 (59.8%)	68 (64.15%)	271 (63.76%)
Atypical	9 (4.28%)	7 (2.5%)	5 (4.6%)	7 (6.6%)	2 (0.47%)
Suspicious	3 (1.42%)	2 (0.7%)	9 (8.4%)	7 (6.6%)	32 (7.52%)
Malignancy	26 (12.38%)	50 (18.5%)	25 (23.3%)	24 (22.64%)	120 (28.23%)
Unsatisfactory	24 (11.42%)	20 (7.4%)	4 (3.7%)	0	0

CONCLUSION- Fine needle aspiration cytology is a rapid and effective method for the primary categorization of palpable breast lumps into benign, malignant, suspicious and unsatisfactory categories. Benign breast lesions are common than malignant lesions. Fibroadenoma and fibrocystic disease are more common in benign disease. Diagnostic accuracy of the procedure for malignant lesions is well established. Moreover, FNAC can be repeated in cases of suspicious diagnosis or inadequate smear. Can be followed with biopsy for further confirmation. Due to rapid diagnosis we can reduce morbidity and mortality due to breast cancer and prevent further complications. Thus, it is proved that early detection by FNAC and prompt management helps in reducing the morbidity and restricting the disease progression at the very initial stage. It avoids unnecessary surgical intervention.
Also, Anganwadi workers and media can help in creating awareness among women in peripheral areas.

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