

Clinical Correlation of Different Breast Lump by Cytopathology in Surgery Outpatient Department of BSMMU, Dhaka, Bangladesh

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Abstract:

Background: A breast lump is the most common symptom associated with both benign and malignant breast diseases. But identification of benign from malignant lump is so crucial for patient management. Clinical diagnosis is possible with CBE (clinical breast examination) but cytopathology by doing FNAC is proven essential for confirm the diagnosis for management protocol. **Objective:** The objective of this study was to evaluate the role of FNAC to detect the different breast lumps in diagnosis and their comparison. **Methods:** A prospective cross-sectional study was conducted over a period of one year from January 2011 to December 2011. A total of 115 patients were included in this study. All breast lumps were diagnosed clinically in out-patient department of surgery, BSMMU, Dhaka, Bangladesh compared with the FNAC findings. Data were collected from these patients by a preformed questionnaire and finally the data were analyzed. **Results:** Among the 115 patients 26(22.61%) patients found malignant and benign 89(77.39%) which was done by FNAC. **Conclusion:** The present study was undertaken to evaluate in diagnosing breast mass lesions individually by doing FNAC in out-patient department for definitive management of a patient.

Keywords: Breast lump, FNAC, benign, malignant.

I. Introduction

Breast disease in women encompasses a spectrum of benign and malignant disorders. [1] The most common breast problems for which women consult a physician are breast pain, nipple discharge, and a palpable mass. Early menarche (before the age of 12), late natural menopause (after the age of 55), not bearing children, and first pregnancy over the age of 30 all increase lifetime exposure to oestrogen and progesterone and the risk of breast cancer. [2] Breast lumps occur due to a variety of etiology ranging from benign conditions such as breast cysts and fibroadenoma, infective/inflammatory conditions such as lactational mastitis, granulomatous mastitis, and antibioma to malignant like ductal carcinoma. FNA cytology of the breast lump has been used in Edinburgh for several years, and evidence of its value in diagnosis has already been presented. [3] FNAC is a less invasive, simple, cheap, and outpatient department (OPD)-based procedure with rapid results. Accurate pre-operative evaluation is important as it allows rapid referral of malignant cases for further treatment and thus improves the cure rate and survival rate and discharge of benign cases from the clinic. FNAC can play a pivotal role in the primary categorization of breast lump and comparatively early diagnosing benign and malignant in majority of cases. [3-6] The aim of this study is to correlate the different diagnosed breast lump by FNAC in out-patient department.

II. Methodology

This study was a prospective and cross-sectional study and conducted on 115 consecutive women attending in the Surgery out -patient department in the BSMMU, Dhaka, Bangladesh in between January 2011 to December 2011. All female patients with breast lump at the 11 to 80 years of range were included in the study. Male patient with breast disease and patient with histopathologically proved diagnosis were excluded in this study.

There were no ethical problems as before study procedure conducted, verbal consent of patient was taken. Disagreed cases were not included in this study. Relevant information (according to questionnaire) were taken from patients and physical examination were done in detail. In all cases experienced pathologist analyzed the cytology report of FNAC of all breast lumps. If a case was unclear, a second pathologist was consulted. All data were analyzed manually in view of the objective of this study. Frequency, distribution and proportions were calculated for the values. Results were published in tabulated form.

III. Result

The total number of cases were 115. Most of the patients were in the age group 21-50 years. Among them 37 (32.17%) cases were present in 31-40 years of age group. Left sided breast lump was more 67(58.26%). Breast lump with pain was 33(28.70%) and breast lump with nipple discharge was 21(18.26%). Cytopathologically benign breast lesions were 89(77.39%) and malignant 26(22.61%). The commonest disease of the breast were fibroadenoma 40 (34.78%), duct cell carcinoma 23 (20%) and another commonest benign but notorious disease granulomatous mastitis 19(16.52%).

Table I: (Age distribution of different breast lumps)

Age of the patient	Number of cases (n=115)	Percentage (%)
11-20	05	4.35
21-30	23	20.0
31-40	37	32.17
41-50	24	20.87
51-60	14	12.17
61-70	11	9.56
71-80	01	0.87
Total	115	100.0

Table II: Distribution of clinical symptoms of the patients (n=115)

Variables	Number (n=115)	Percentages (%)
Presence of a right breast mass	48	41.74
Presence of a left breast mass	67	58.26
Presence of associated pain	Yes	33
	No	82
Presence of nipple discharge	Yes	21
	No	94

Table III: Distribution of cytological outcome and diagnosis of the breast masses (n=115)

Nature of mass (by FNAC)	Number (n=115)	Percentage (%)
Benign	Fibroadenoma	40
	Fibrocystic disease	13
	Galactocele	10
	Granulomatous mastitis	19
	Phylloides tumor	7
Malignant	Invasive ductal carcinoma	23
	Lobular carcinoma	3
Total	115	100.0

IV. Discussion

The European projects included three series which used FNA cytology in second stage screening, but separate evaluation of its role was not reported. In Edinburgh such assessment can be made and shows clearly that FNA cytology contributes substantially to a retrospective and restricted selection, when combined with clinic assessment category; the yield of cancer is then maximised while maintaining a greater than 50% reduction in benign biopsy specimens. [7, 8]

Total 115 patients were included in this study. The breast diseases were more common between the age of 31-40 years and it was 37(32.17%). Bukhari MH, Arshad M showed that the distribution was 23, 76,166,86,53,16 and 5 cases respectively. This disparity due to more number of cases according to age range in this study. [9]

In comparison between benign and malignant cases among the 115 cases. In cytopathology 89 (77.39%) were benign and 26(22.61%) cases were malignant. Ahmed S, Raza SZ found the percentage of benign 80% and that of malignant 20%. [10]

This study revealed that maximum diseases were benign in nature. Among them 40(34.78%) were fibroadenoma, 13(11.30%) were fibrocystic disease and only 26(22.61%) were malignant. Next granulomatous mastitis 19(16.52%) and galactocele 10(8.70%) were present. Okoye and co-workers [11] and Muddegowda et al. [12] found that fibroadenoma was also the most common benign breast lesion followed by fibrocystic diseases. Another study revealed of the 750 solid nodules 625(83%) were benign and 125(17%) were malignant. The overall negative to positive biopsy ratio was 5:1. [13] Bukhari MH found mastitis 4.32% and breast tuberculosis 2.3%. Erofen F found 24.75% granulomatous mastitis and 7.29% tubercular mastitis. [14]

V. Conclusion

Lump in the breast is a common clinical manifestation with etiology ranging from benign to borderline lesions to frank malignancy. The most common benign lesion was fibroadenoma in the present study. Similarly, the most common malignant lesion was invasive ductal carcinoma. Breast-related ailments were found frequently in females of the reproductive age group and in the outer upper quadrant of the breast. From the study, we can draw the conclusion that there is a positive correlation between clinical diagnosis and FNAC in out-patient department.

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