

Rate of Distribution of Breast Lump in Different Quadrants with Their Cytological Findings in Both Sex

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Abstract

Background: The breast lump is a localized swelling, protuberance, bulge, or bump in the breast that feels different from the breast tissue around it or the breast tissue in the same area of the other breast. **Objective:** The purpose of the present study was to find out the frequency of breast lump in different quadrants and their cytological findings. **Methodology:** The present study was carried out at the Department of Pathology, Chittagong Medical College, Bangladesh one-year period from May 2005 to June 2006. This study was cross sectional which included 110 cases of breast lump. The patients with breast lump were received from indoor and outdoor patient Department of Surgery, Chittagong Medical College, Bangladesh. The patient presents with definite palpable lump, irrespective of age and sex were included in this study. **Result:** This study shows only 1.8% male were found central quadrant individual breast. In female maximum (46.4%) were found in upper & outer quadrant individual breast. Right sided of affected breast in highest percentage of upper & outer quadrant individual breast (21.8%). Also shows left side of affected breast in highest percentage of upper & outer quadrant individual breast (24.5%). It was observed that maximum (34.5%) upper & outer quadrant individual breast was seen in benign lesion and (3.6%) were suspicious. But maximum (12.7%) were show multiple in malignant lesion. **Conclusion:** In conclusion highest frequency of patients are reported in upper outer quadrant breast lump followed by multiple, central, lower & inner and lower & outer. It also observed that the upper outer quadrant is the most commonly affected quadrant in benign and multiple quadrant the malignant breast neoplasms. [Journal of National Institute of Neurosciences Bangladesh, 2019;5(1): 69-71]

Keywords: Breast Lump; Quadrants of breast; Cytological Findings

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Introduction

Breast lump is the most common reason for presenting to surgery departments. Most of these patients, however, are in a state of heightened anxiety until they have undergone specialist assessment, the necessary investigations and eventual reassurance. The majority of patients referred to a surgery department is said to have

benign disease¹⁻³. Fibroadenoma is the most common of the benign breast diseases⁴⁻⁷.

Many studies have shown that the upper outer quadrant of the breast is the most frequent site for occurrence of breast cancer⁸⁻⁹. The upper outer quadrant had the highest breast area and the highest dense area, with a 20% density. The lower outer quadrant had the majority of

cancer (60.9%), followed by the lower inner quadrant (18.2%), the upper inner quadrant (14.5%), and the lower outer quadrant (6.4%). An adequate explanation for this asymmetric occurrence of breast cancer within the breast has never been established. Since density is a risk factor, it would be very interesting to investigate the relationship between quadrant density and the tumor occurring quadrant location¹⁰. This present study was undertaken to find out the frequency of breast lump in different quadrants and their cytological findings.

Methodology

This cross-sectional study was carried out at the Department of Pathology at Chittagong Medical College, Chittagong, Bangladesh for one-year period from May 2005 to June 2006. The patients with breast lump were received from indoor and outdoor patient Department of Surgery, Chittagong Medical College, Bangladesh. The patient presented with definite palpable lump, irrespective of age and sex were included in this study. FNA was done in all patients. After collection, the tissue was smeared on glass slide and fixed in 95.0% alcohol for Papanicolaou's staining. The smear was prepared slowly forward with an "up and down" movement with another slide inclined at an angle of 45 degrees, over the drop. The smeared slides were promptly dipped in 95% ethyl alcohol for fixation and to prevent drying artifacts. The smear prepared from FNA was stained by pap's stain. All tissues were study cytologically and all data were statistically evaluated in SPSS version 17.

Table 1: Distribution of Breast Lump in Different Quadrants of Both Sex (n=110)

Sex	Quadrant Individual breast						Total No(%)
	Upper & Outer	Upper & Inner	Lower & outer	Lower & Inner	Central	Multiple	
	No(%)	No(%)	No(%)	No(%)	No(%)	No(%)	
Male	0(00)	0(00)	0(00%)	0(00)	2(1.8)	0(00)	2(1.8)
Female	51(46.4%)	14(12.7%)	2(1.8)	4(3.6)	13(11.8)	24(21.8)	108(98.2)
Total	51(46.4%)	14(12.7%)	2(1.8)	4(3.6)	15(13.6)	24(21.8)	110(100)

Table 3: Cytological findings of breast lump found in different quadrants (n=110)

Quadrant of Individual Breast	Cytological findings				Total No(%)	P value
	Benign	Malignant	Inflammatory	Suspicious		
	No(%)	No(%)	No(%)	No(%)		
Upper & Outer	38(34.5)	9(8.2)	0(00)	4(3.6)	51(46.4)	0.001
Upper & Inner	8(7.3)	6(5.5)	0(00)	0(00)	14(12.7)	
Lower & outer	1(0.9)	0(00)	0(00)	1(0.9)	2(1.8)	
Lower & Inner	1(0.9)	3(2.7)	0(00)	0(00)	4(3.6)	
Central	9(8.2)	4(3.6)	2(1.8)	0(00)	15(13.6)	
Multiple	9(8.2)	14(12.7)	1(0.9)	0(00)	24(21.8)	
Total	66(60)	36(32.7)	3(2.7)	5(4.5)	110(100)	

Results

This study was cross sectional which included 110 cases of breast lump.

Table 1 shows only 1.8% male were found central quadrant individual breast. In female maximum (46.4%) were found in upper & outer quadrant individual breast.

The right side of affected breast has in the highest percentage of upper & outer quadrant individual breast (21.8%) and also showed left side of affected breast in highest percentage of upper & outer quadrant individual breast (24.5%) (Table 2).

Table 2: Distribution of Breast Lump According To Location and Side of the Breast (n=110)

Quadrant of Individual Breast	Side of affected breast		Total
	Right	Left	
Upper & Outer	24(21.8%)	27(24.5%)	51(46.4%)
Upper & Inner	9(8.2%)	5(4.5%)	14(12.7%)
Lower & outer	1(0.9%)	1(0.9%)	2(1.8%)
Lower & Inner	1(0.9%)	3(2.7%)	4(3.6%)
Central	7(6.4%)	8(7.3%)	15(13.6%)
Multiple	11(10.0%)	13(11.8%)	24(21.8%)
Total	53(48.2%)	57(51.8%)	110(100.0%)

In table 3 it was observed that maximum (34.5%) upper & outer quadrant individual breast was seen in benign lesion and (3.6%) were suspicious. But maximum (12.7%) were show multiple in malignant lesion. Others on depicted in tables.

Discussion

The present study was carried out at the Department of Pathology, Chittagong Medical College, Bangladesh one-year period from May 2005 to June 2006. This study was cross sectional which included 110 cases of breast lump. The patients with breast lump were received from indoor and outdoor patient Department of Surgery, Chittagong Medical College, Bangladesh. In this study shows only 1.8% male were found central quadrant individual breast. In female maximum (46.4%) were found in upper & outer quadrant individual breast. These findings consistent with others studies^{4,6,7}.

In the present study, both sides (right and left) were almost equally involved by the different types of cytological lesions. This is in contrast with the findings of Meena et al¹¹, Reddy and Reddy¹² and Clegg-Lampthey and Hodasi¹³ in which the left side was slightly more common.

Upper and outer quadrant was the most commonly involved quadrant (46.4%) in the present study. This is in agreement with the findings of other studies like Zuk et al¹⁴ (42.20%), Reddy and Reddy¹⁵ (54.20%), Meena et al¹¹ (54%) and Clegg-Lampthey and Hodasi¹³ (42.40%). The exact cause of this finding is not known. In the present study, more benign cases and less malignant were found histologically than studies by Mohammed et al¹⁵, Kim et al¹⁶ and Choi et al¹⁷ This higher number of benign and lower number of malignant cases in other studies may be due to good follow up or more awareness amongst the patients.

It was observed that maximum (34.5%) upper & outer quadrant individual breast was seen in benign lesion and (3.6%) were suspicious. However, maximum (12.7%) were show multiple in malignant lesion. This is in agreement with the findings of other studies^{5,11,13}.

Conclusion

This study shows highest of frequency of patients were upper outer quadrant then multiple, central, lower & inner and lower & outer. It also observed that the upper outer quadrant was the most commonly affected quadrant in benign and multiple quadrant the malignant breast neoplasms. Further investigation using exactly the same quadrant division method is needed to explore the direct association of quadrant breast cytology with cancer occurrence risk.

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