



FNAC OF BREAST LUMP-A RETROSPECTIVE STUDY

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ABSTRACT

Introduction-Breast lump is a common complaint in women of all ages associated with a great anxiety & fear of underlying malignancy. Various diagnostic methods have been developed but FNAC is an ideal & popular procedure for evaluation of breast lump.

Materials & methods - A hospital based retrospective study was conducted over a period of 2 years from October 2016 to September 2018. Materials obtained from FNAC were used for preparation of smears. The air-dried smear and wet-fixed smear were stained with Giemsa stain and rapid Pap stain respectively.

Result - In a total of 161 cases of breast lump studied, fibroadenoma (85/52.79%) was the most common breast lump followed by fibrocystic disease(32/19.87%) & nonspecific mastitis/abscess (27/16.77%). Malignancy was found in 5.59% cases. The age group more commonly involved was 21-30 years (56/34.78%) & 31-40 years (48/29.81%) with more lump in right breast & upper-outer quadrant.

Conclusion - FNAC is rapid, effective & repeatable method for primary categorisation of breast lump which avoids the unnecessary surgical intervention.

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INTRODUCTION

Breast is a modified sweat gland which has a social, cultural & personal significance not shared by other organs. A lump in the breast is a common complaint in women of all ages which may arise either spontaneously or gradually. Though the majority of the lumps are benign in nature, the patients bear a great anxiety and fear of underlying malignancy. Indeed the breast cancer is the second most common cancer after carcinoma of cervix in developing countries including India.

The final diagnosis of breast lump is made by surgical biopsy, but the FNAC is an ideal and popular initial diagnostic procedure. This procedure is simple, safe, sensitive and economical which requires neither any anaesthesia nor too much preparation. Tru-cut biopsy is expensive and time consuming as well as not widely used. A combination of three tests known as "Triple Assessment of Breast" includes physical examination, breast imaging (mammogram &/or ultrasound) and pathological test (needle aspiration or core biopsy). This test is gaining more popular for accurate diagnosis of breast lump in most countries.

Aims & Objectives: To analyse & assess the cases of breast lump by FNAC

MATERIALS AND METHODS

A hospital based retrospective study over a period of 2 years from October 2016 to September 2018 was carried out in cytopathology section of Pathology department, Patliputra Medical College, Dhanbad, Jharkhand. A total number of 161 females referred to Pathology department for FNAC of breast lump were included in our study. A short history of the patient was taken and physical examination was performed. After that FNAC was conducted by making use of a 20 ml disposable syringe bearing a 21/22 gauge needle under aseptic and antiseptic measures. The materials were obtained on labelled glass slides and smears were prepared. The air-dried smear was stained with Giemsa stain while wet-smearfixed in absolute alcohol was stained with rapid Pap stain.

The cases of 16-62 years of age with clinically palpable breast lump were included in our study while inadequate smears & equivocal cyto-diagnosis were excluded.

RESULT

In present study of 161 cases of breast lump, there were mostly of age group of 21-30 years(56/34.78%) followed by 31-40 years(48/29.81%) while the least number of age group of more than 60 years(3/1.86%) followed by 51-60 years (9/5.59%) (Table 1).

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Table 1 Age group with cytological diagnosis of breast lump

Age group(in years)	Number of cases	FA	FCD	NSM/Abs.	EHA	Galact.	Malig.
<21	23(14.28%)	19(11.80%)	-----	3(1.86%)	-----	1(0.62%)	-----
21-30	56(34.78%)	39(24.22%)	6(3.72%)	9(5.59%)	-----	2(1.24%)	-----
31-40	48(29.81%)	23(14.28%)	14(8.69%)	11(6.83%)	-----	-----	-----
41-50	22(13.66%)	4(2.48%)	10(6.21%)	3(1.86%)	2(1.24%)	-----	3(1.86%)
51-60	9(5.59%)	-----	2(1.24%)	1(0.62%)	2(1.24%)	-----	4(2.48%)
>60	3(1.86%)	-----	-----	-----	1(0.62%)	-----	2(1.24%)
Total	161	85(52.79%)	32(19.87%)	27(16.77%)	5(3.10%)	3(1.86%)	9(5.59%)

Note: FA - Fibroadenoma, FCD - Fibrocystic disease, NSM/Abs - Non specific mastitis/abscess, EHA - Epithelial hyperplasia with atypia, Galact - Galactocele, Malig - Malignant.

Fibroadenoma (85/52.79%) was seen in more than half number of cases followed by fibrocystic disease (32/19.87%) & non-specific mastitis/abscess (27/16.77%). Galactocele was found only in 3 cases (1.86%) of earlier age group. Epithelial hyperplasia with atypia and malignancy were noted in later age group with 5 cases (3.10%) and 9 cases (5.59%) respectively.

Table 2 Size of breast lump

Maximum diameter (in cm)	Number of cases		
	Benign lump	Malignant lump	Total
<5	109(67.70%)	-----	109(67.70%)
5 - 10	42(26.08%)	7(4.34%)	49(30.42%)
>10	1(0.62%)	2(1.24%)	3(1.86%)
Total	152(94.40%)	9(5.59%)	161

Table 3 Location and side of breast lump

Quadrant	Number of cases		
	Right breast	Left breast	Total
Upper-outer	41(25.46%)	26(16.15%)	67(41.61%)
Upper-inner	19(11.80%)	15(9.31%)	34(21.11%)
Lower-outer	9(5.59%)	8(4.96%)	17(10.55%)
Lower-inner	11(6.83%)	7(4.34%)	18(11.18%)
Central	14(8.69%)	11(6.83%)	25(15.52%)
Total	94(58.38%)	67(41.61%)	161

According to size of breast lump, majority of cases were found in less than 5 cm (109/67.70%) followed by 49 cases (30.43%) in between size of 5-10 cm (Table 2). Right breast lump was found in 94 cases (58.38%) which was more common than left breast lump (67/41.61%) (Table 3). Both right and left breast had more involvement of upper-outer quadrant (41/25.46% and 26/16.15% respectively) followed by upper-inner quadrant (19/11.80% and 15/9.31% respectively).

DISCUSSION

Breast is an easily accessible site for FNAC. Various cytopathological reports provide very high accuracy of FNAC. The present study confirms the worth and clinical utility of FNAC in investigation and management of various types of breast lump.

In present study, fibroadenoma (85/52.79%) was the most common breast lump which was similar to study of Qasim *et al* (82.14%) & Tiwari (56.25%). This lump was followed by fibrocystic disease (32/19.87%) & non-specific mastitis/abscess (27/16.77%) similar to study of Dominguez *et al* 32.17% & 1.55% respectively but dissimilar to study of Qasim *et al* & Tiwari where fibroadenoma was followed by mastitis/abscess (10.71%/20.31%) & fibrocystic disease (3.57%/7.81%). Jayaram *et al* in their study found fibrocystic disease (39.80%) as the most common lump.

In study of Khemka *et al* and Hussain, the majority of cases belonged to age group of 31 - 40 years while in our study 21-30 years followed by 31- 40 years. The malignant lump was present in the age group of 41 year onwards similar to study of Roch *et al* but dissimilar to study of Macintosh *et al* (63 year onwards) & Khemka *et al* (35 years onwards). This lump was present in 9 cases (5.59%) similar to study of Yeoh *et al* (4.43%) but in contrast with study of Park *et al* (12.7%) and Mohammad *et al* (24.2%).

CONCLUSION

Triple assessment of breast with clinical, imaging & pathological examination is a standard approach for evaluation of breast lump. However FNAC is rapid & effective method for primary categorisation of the lump which can also be repeated. This technique avoids the unnecessary surgical intervention. The early detection & prompt management may help in reducing the morbidity & disease progression associated with breast lump.

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