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Prevalence of Breast Lesions on Fine Needle Aspiration Cytology

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Abstract
Background: : *Fine Needle Aspiration Cytology (FNAC) of breast lump is an important mode of diagnosis of breast diseases due to its easy accessibility and negligible complications and it forms a part of triple assessment with very high sensitivity, specificity and good patient compliance in various studies done before.*
Objective: *The objective of study was to know prevalence of different breast diseases in various age groups and to know the size variations of breast lumps.*
Material and Methods: *We studied 81 patients presenting with palpable breast lump in the 6 months from 1st Aug 2016 to 30th Jan 2016, in the OPD Of AIMS, Dewas that were sent to dept of pathology for FNAC for further evaluation.*
Results: *We found that benign breast lesions were most common category followed by malignant lesions and then inflammatory lesions.*
Conclusion: *FNAC is quick, reliable, diagnostic and often done without any complication.*
Keywords: *Breast lump, Fine Needle Aspiration Cytology (FNAC), Prevalence of breast diseases.*

Introduction

Benign as well as malignant breast lesions are very common in Indian females. It is the second most common cancer after cancer cervix in Indian females. Currently, 75,000 new cases of breast cancer are diagnosed in India every year.[1] Accurate diagnosis of breast lesions depend on a triple assessment approach comprising of clinical examination, imaging technique and pathologic examination in the form of FNAC. FNAC is widely adopted for the pathologic assessment because of its accuracy and ease of use, being inexpensive, and can be performed with little complications. [2] It provides diagnosis with only 10-30% of the cost of surgical biopsy. As FNAC becoming more reliable in diagnosing malignancy and thereby the use of frozen-section histology has been reduced by about 80%.[3] Breasts lesion can be categorized in four major categories viz: inflammatory lesions, benign lesions, lesions suspicious for malignancy and malignant lesions and they show very good correlation with histopathological diagnosis. We performed FNAC in 81 patients presented with palpable breast lumps in last 6 months in our institution.

Materials & Methods

It was a prospective study where FNAC on 81 female patients were done to know the frequency distribution of different lesions in those who

presented with palpable breast lump in OPD of AIMS, Dewas and after mammography subsequently sent to Dept of Pathology for FNAC for further evaluation. FNAC was carried out using 10ml disposable syringe and 23 gauze needle after explaining the procedure and taking aseptic precaution and proper consent to the patients. After FNAC both dry and wet smears were made, fixed and stained quickly with Giemsa and Papanicolaou stain in cytology section of dept of pathology. Smears were examined under microscope and same day reports were dispatched.

Results

The age of the patients ranged from 15 to 66 years. Highest frequency of benign breast lesions was seen in patients of 15-30 years of age and over all while malignant lesions were found mostly in 40-60years of age group. Size of lumps was more than 5cms in 17.28% of cases and less than 5cms in 82.72% of cases. Most of patients belonged to benign breast lesions category had fibroadenoma (37%) while in malignant lesions ductal carcinoma was most common (19.7%).

Tab.1: Age distribution of the patients

Age group (years)	Number of cases	%
15-20	09	11.2
21-30	20	24.7
31-40	22	27.1
41-50	12	14.8
50-60	16	19.7
>60	02	2.5
Total	81	100

Tab.2: frequency of size of breast lumps

No. of patients	Size of lumps on mammography		Total
	Less than Or equal to 5 cms	More than 5 cms	
	67	14	81
Freq.	82.72%	17.28%	100%

Tab.3: frequency of various breast diseases

Category	Cytological diagnosis	No of cases	%	Total
Inflammatory	Abscess /mastitis	13	16.1	18.6%
	Granulomatous mastitis	02	2.5	
Benign breast lesion	Fibroadenoma	30	37.0	50.6%
	Fibrocystic breast disease	05	6.1	
	Duct hyperplasia	02	2.5	
	Simple cyst	03	3.8	
	Ductal papilloma	01	1.2	
Suspicious for malignancy	Ductal hyperplasia with atypia	04	4.9	6.1%
	Ductal carcinoma in situ	01	1.2	
Malignant lesion	Ductal carcinoma	16	19.7	24.7%
	Lobular carcinoma	02	2.5	
	Meddulary carcinoma	02	2.5	
Total		81		100%

Discussion

The study populations ranged from 15-66 yrs that is in resonance with the study of Ahmed et al in 2016 (10-80yrs) and Bukhari et al in 2011 (16-70yrs). Majority of cases were reported in 31-40yrs age group (68.6%) in our study which is in agreement of study done by Ahmed et al in 2016. [4, 5] Most of the patients had lump more than 5cms in our study, similarly Prajapati CL et al, Rahman et al and Kandukuri et al found majority of the patients had average size of lumps less than or close to 5cm, possibly due to awareness and early detection of lump by patient themselves. [6, 7] In accordance with most of studies done before we found benign breast lesion had highest frequency among all and fibroadenoma was most common in benign category. Malignant lesions were second most common after benign lesion and ductal carcinoma had highest frequency among malignant group. [8]

Conclusion

FNAC is easy, safe, accurate and quick diagnostic method for evaluation of palpable breast lump in all the age group.

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Conflicts of interest: none
Competing interest: none

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