



CYTOMORPHOLOGICAL STUDY OF DIFFERENT LESIONS IN MEDICAL COLLEGE OF RURAL MAHARASHTRA

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ABSTRACT

Background: Fine needle aspiration cytology (FNAC) is used in diagnosis of superficial & deep seated swellings of various organ of body. Different organs include breast, lymph node, thyroid, salivary gland & soft tissue etc. FNAC gives added advantage as it is an outpatient procedure & gives early differentiation from non-neoplastic & malignant lesion. The present study was aimed to study clinical features & cytomorphology of different lesions in body. **Material & methods:** The observational present study was undertaken in department of pathology in new medical college in rural Maharashtra over a period of 1 year. The aspiration material was smeared and stained by haematoxylin and Eosin (H&E), Papanicolaou stains, special stains were applied wherever necessary. Cytological findings were recorded and analysed. **Results:** Total 185 patients underwent FNAC of different lesions during study period. Male to female ratio was 1:2.3 and mean age was 40.2 years. Maximum number of cases (32%) were involving the breast lump followed by lymph node (22.85%) and thyroid (17.71%), salivary gland (11.42%), Miscellaneous (16%). Among breast lump fibroadenoma was the predominant lesion (66%). In lymph node lesion (44%) cases showed reactive lymphadenitis. In thyroid lesion (83%) cases showed colloid goitre. Among salivary gland lesion pleomorphic adenoma was predominant (65%). Miscellaneous cases included, epidermal cyst (32%), lipoma (25%), ganglion cyst (7.14%), benign cystic lesions (17.85%), Inflammatory lesion (10.71%) and giant cell lesion & benign spindle cell lesion (3.57%) each. **Conclusion:** FNAC is a simple rapid OPD based procedure used in diagnostic tool in rural areas also. FNAC gives direction to clinician to treat different lesions of the body.

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INTRODUCTION

FNAC is simple rapid diagnostic tool used in diagnosis of superficial and deep seated lesions in the body. This non-invasive technique is easily performed on OPD basis. It can be used for diagnosis and as therapy in cystic lesion. It can be used along with CBNAAT for diagnosis of tuberculous lymphadenitis. USG guided FNAC can be used to get high yield of smears in cases of thyroid lesion or deep seated lesion in the body.

FNAC is the most diagnostic tool used in assessment of inflammation, neoplastic lesion presenting as palpable masses. It gives early differentiation from non-neoplastic, benign & malignant lesions. It gives added advantage as it is OPD procedure & helps to avoid surgical intervention in non-neoplastic cases or inflammatory condition. It can be repeated

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in inadequate yield & reduces need of exploratory procedure.

The present study was aim to study cytomorphology of different lesion in the body & also to determine frequency of different lesion at different site, to determine age wise, sex wise distribution of lesions.

MATERIAL AND METHODS

Total 185 patients were underwent FNAC of different region during study period. FNAC of 10 patients were inconclusive. Amongst 175 FNAC, 25 FNAC were USG guided. These lesions were deep seated. It was observed that female (122) outnumbered males (53). Male to female ratio is 1:2.3. In present study maximum number of cases were seen in 4th decade followed by 3rd decade as shown in chart 1. The mean age was 40.2 years in present study.

In present study, maximum number of cases (32%) were of breast lump. Lymphadenopathy was seen in 40 cases (22.85%). Thyroid gland was involved in 31 cases (17.71%). Salivary gland lesion seen in 20 cases (11.42%). Remaining cases (17.71%) were epidermal cyst, ganglion cyst, giant cell lesion, soft tissue swellings such as lipoma, etc.

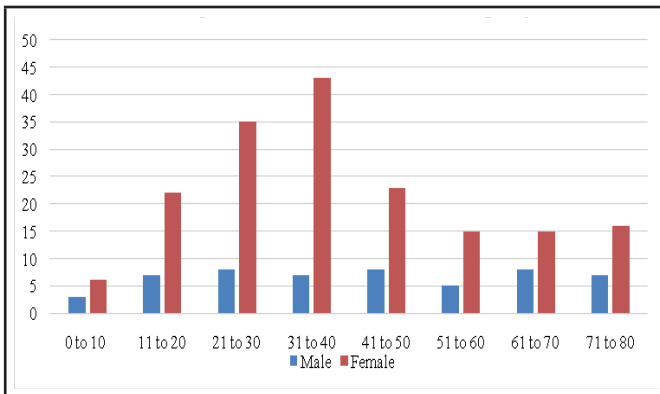


Chart 1 Age and sex wise distribution of FNAC cases Age (In years)

	n	%
Breast	(56)	(32.00)
Fibroadenoma	37	66.00
Positive for malignancy	08	14.28
Acute mastitis	07	12.5
Benign cystic lesion	04	7.1
Lymph node	(40)	(22.85)
Tuberculous lymphadenitis	09	22.50
Reactive lymphadenitis	19	47.50
Acute suppurative lymphadenitis	09	22.50
Metastatic lymphadenitis	03	0.7
Thyroid	(31)	(17.71)
Colloid goitre	26	83.00
Follicular neoplasm	04	2.9
Thyroiditis	01	3.22
Miscellaneous	(28)	(16.00)
Epidermal cyst	09	32.14
Lipoma	07	25.00
Benign cystic lesion	05	17.85
Inflammatory	03	10.71
Ganglion cyst	02	7.14
Giant cell lesion	01	3.57
Benign spindle cell lesion	01	3.57
Salivary gland	(20)	(11.42)
Pleomorphic adenoma	13	65.00
Cystic lesion	02	10.00
Chronic Sialadenitis	02	10.00
Acute Sialadenitis	02	10.00
Oncocytic lesion	01	05.00
Total	175	100

Among breast lumps, fibroadenoma was the predominant one (66.00%) [Fig.1]. followed by malignant (14.28%), Acute mastitis (12.5%), Benign cystic lesion (7.1%). In present study among lymph node lesions, reactive lymphadenitis was the

predominant (47.50%). followed by chronic granulomatous lymphadenitis & acute suppurative lymphadenitis had same number of cases (22.5%), metastatic lymphadenitis (7.5%) [Fig.2]. In present study in thyroid lesions, 26 cases (83%) showed colloid goitre of which 7 cases showed cystic change. 04 cases (12.9%) showed follicular neoplasm. Thyroiditis was seen in 01 case (3.22%).

Amongst salivary gland lesions pleomorphic adenoma (65%) [fig.3] outnumbered than chronic sialadenitis (10%), cystic lesion (10%), acute sialadenitis. Only one case showed oncocytic lesion

Miscellaneous cases included, epidermal cyst 09 cases (32.14%), lipoma 7 cases (25.00%), 5 cases of benign cystic lesion (17.85%), 03 inflammatory cases (10.71), 02 case of ganglion cyst (7.14%) and 1 case of each benign spindle cell lesion & giant cell lesion (3.57%).

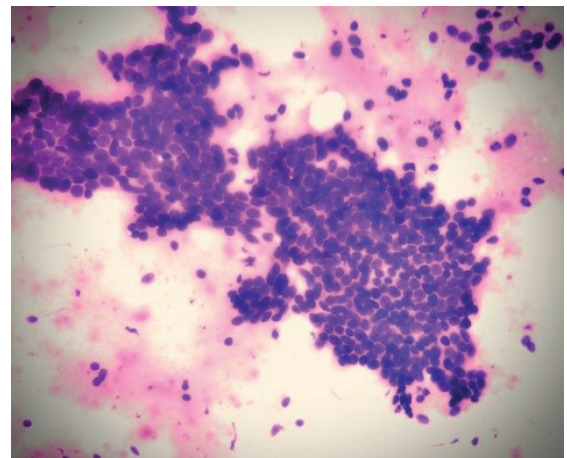
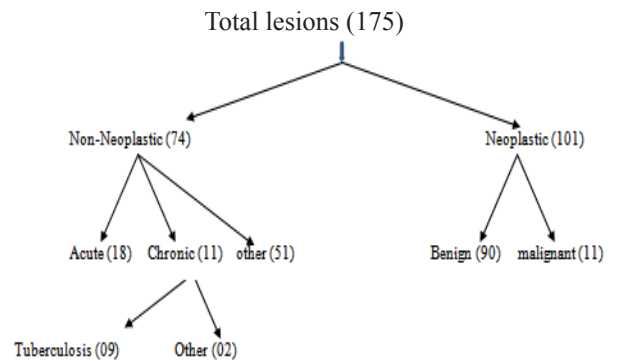


Fig.1 Photomicrograph showing fibroadenoma of breast (H& E,400x)

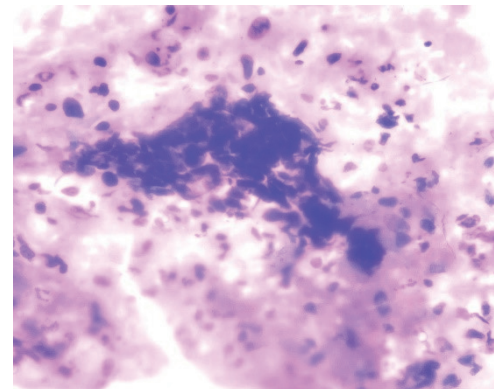


Fig.2 Photomicrograph showing Metastatic Lymphadenitis (H& E,400x)

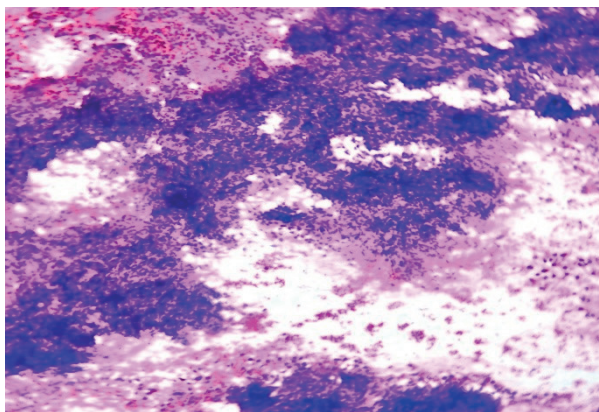


Fig.3 Photomicrograph showing Pleomorphic adenoma of salivary gland (H& E,400x)

DISCUSSION

FNAC is simple rapid diagnostic tool. It is used as an OPD procedure to diagnose various lesions of the body. The present study was carried over the period of 1 year and it included 175 patients presented with swelling in different parts of the body.

In present study maximum number of cases seen in 4th decade which was in concordance with study done by Sheikh et al. In present study female preponderance was observed (M: E-1:2.3) similar findings were noted by Khetrpal et al (1:1.3), Sheikh et al (0.87:1), Gupta et al, Prasad et al (1: 5), William et al, Tabassum et al.

In the present study maximum number of cases of breast lump. In breast lesion 07 cases were of acute mastitis whereas remaining cases of neoplastic. Amongst neoplastic cases, maximum number of cases of fibroadenoma, followed by malignant cases. Aslam et al documented Fibroadenoma as the most common benign lesion in their study. In present study fibroadenoma was seen in the age group ranging from 13 to 35 years. This was similar to the finding by Khemka et al () and Rocha et al () who had maximum number of cytological benign cases in the age group 15-44 years and 14-40 years.

In present study, most common cause of lymphadenopathy was reactive lymphadenitis followed by equal incidence of tuberculous lymphadenitis & acute suppurative lymphadenitis. Amongst 40 cases of lymphadenopathy 03 cases were of metastatic lymphadenitis.

Thyroid nodule was more common in female than male. Unnikrishnan et al, Shirishchandanwale et al and Laxmi S et al showed colloid goitre was the commonest lesion which was also observed in present study.

FNAC differentiates neoplastic lesion of thyroid from nonneoplastic lesions to get a definite diagnosis and plan a proper surgical procedure of thyroid swelling

In present study, 32.14% epidermal cysts were observed. 25% lipoma cases were observed which was in concordance with study done by sheikh et al (16.3%).

In present study, salivary gland lesions accounted for 11.42% cases.

In present study out of 175 FNAC cases 20 cases had come for histopathology. Amongst 20 cases 12 cases (60%) was

correlated with histopathological findings.

CONCLUSION

FNAC is a simple, rapid OPD based procedure used as a diagnostic tool used in rural area also. FNAC definitely reduces surgical biopsies for diagnosis of lesions and gives direction in the management of swelling in different body organs.

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