



## SPECTRUM OF LESIONS OF THYROID BY FINE NEEDLE ASPIRATION CYTOLOGY IN HADOTI REGION OF KOTA

### Pathology

**Dr R. K. Singh**

Professor , Department Of Pathology, Government Medical College, Kota, Rajasthan.

**Dr Vandana Pathak\***

Associate Professor, , Department Of Pathology,government Medical College, Kota, Rajasthan.\*Corresponding Author

### ABSTRACT

**INTRODUCTION:** Fine needle aspiration cytology is the easiest ,cost effective and safe technique to find out provisional and even final diagnosis in a lots of lesions in thyroid.

**Aims and objectives:**To find out the spectrum of thyroid lesions in this zone of rajasthan.

**MATERIALAND METHODS:** Study was conducted in Government Medical College ,Kota over a time span of 5 months from August 2018 to December 2018. A total of 100 patients approached with thyroid related complaints.

**RESULTS:**Most of patients were females (92%),most common age range was 21 -30years. Most of the lesions were non-neoplastic (96%) and most common benign lesion was colloid goitre (68%).

**CONCLUSION:** FNAC is a highly useful diagnostic tool in experienced hands.

### KEYWORDS

### INTRODUCTION

Fine needle aspiration cytology is easy and cost effective test in the diagnosis of thyroid nodule<sup>[1]</sup>. Fine needle aspiration cytology in thyroid is about 50 years old. Thyroid shows a wide spectrum of diseases from hormonal disturbances to benign to malignant. Fine needle aspiration cytology is a reliable method to have provisional diagnosis about the nature of disease, though it has limitations and has superseded the other investigative procedures. The sensitivity of thyroid FNAC ranges from 74% to 92% and specificity ranges from 74-100%.<sup>[2]</sup> Core biopsy cytological assessment of the thyroid is used in some centres.<sup>[3]</sup> An experienced pathologist can interpret diseases pre-operatively and reduce the burden of unnecessary surgeries on the other hand malignancies can be diagnosed at earliest possible. The addition of Thallium scan is a newer development but it has less sensitivity and at the same time radiation burden.

### MATERIALAND METHODS

This study was conducted in cytology section of Central Laboratory , MBS Hospital attached to Government Medical College Kota. The duration of study was of 5 months from August 2018 to December 2018. All patients coming to laboratory with thyroid lesions/complaints were included in the study. Clinical details , relevant investigations and physical examination of each patient was performed. Fine needle non-aspiration technique was adopted after instructing the patient to hold deglutition. Multiple slides were made ,some were air dried and others wet fixed .If abundant fluid was there ,it was taken in syringe, centrifuged and then sediment slide prepared. Slides were stained with H&E stain and MGG Stain. Microscopic examination was done and provisional diagnosis was given.

### RESULTS AND OBSERVATIONS:

#### TABLE :1 DISTRIBUTION OF SEX

MALES %	FEMALES%
10	90

#### TABLE: 2 AGE AND SEX DISTRIBUTION

AGE GROUP(YEARS)	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
NO.OF PATIENTS	00	08	30	24	24	06	06	02	00	00
NO. OF MALES	00	01	03	02	01	02	01	00	00	00

#### Table: 3 DISTRIBUTION OF CYTOLOGICAL DIAGNOSIS

DIAGNOSIS	NUMBER OF PATIENTS
COLLIOD GOITRE	68
HASHIMOTO'S THYROIDITIS	24
THYROIDITIS OTHER THAN HASHIMOTO'S	04

FOLLICULAR NEOPLASM	01
PAPILLARY CARCINOMA	01
MEDULLARY CARCINOMA	01
ANAPLASTIC CARCINOMA	01

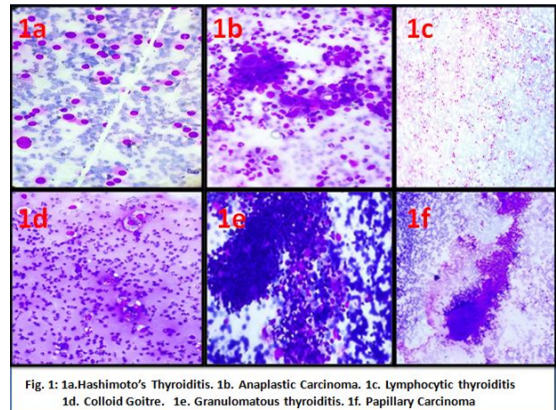


Fig. 1: 1a.Hashimoto's Thyroiditis. 1b. Anaplastic Carcinoma. 1c. Lymphocytic thyroiditis 1d. Colloid Goitre. 1e. Granulomatous thyroiditis. 1f. Papillary Carcinoma

### DISCUSSION

Our study showed 90% female and 10% male patients [Table 1] results comparable with the study done by Chaudhari et al.<sup>[4]</sup> which showed 82% female patients in cytological evaluation of thyroid lesions. Most of the patients are in 21-30 years (30%) age group followed by 31-40 and 41-50 years age range [Table 2] (24% each) showing similar results as found by the study conducted by Ritica Chaudhary et al<sup>[5]</sup> which also maximum number of cases in 21-40 years age range (49.3%). In our study ,no patient was found in the age range of 0 to 10 years and above 80 years. 96% were non-neoplastic lesions of thyroid and 4% were neoplastic. [Table 3].

Colloid goiter (68%) is the most common lesions followed by Hashimoto's thyroiditis in accordance with the study done by Ritica et al<sup>[5]</sup> and S.Chandanwale et al.<sup>[6]</sup> both them showed about 65.3% goitre patients. One case each of Papillary carcinoma, Follicular neoplasm , Medullary carcinoma and Anaplastic carcinoma also found comparable to the study done by Ritica et al<sup>[5]</sup>. Despite the high prevalence of thyroid nodules and incidental malignancies, the prevalence of clinically overt thyroid carcinoma is much lower.<sup>[7]</sup>

### CONCLUSION

Fine needle aspiration cytology is an ultimate procedure for accurate diagnosis of thyroid lesions so that in cases of advanced malignancies ,old age patients and in benign lesions unnecessary surgery can be avoided. Its an outdoor procedure with only few complications.

Accuracy of diagnosis is excellent depending upon reporting officer's experience and aspiration of lesion by himself.

#### REFERENCES:

1. Bagga PK, Mahajan N C. Fine needle aspiration cytology of thyroid swellings: How useful and accurate is it? *Indian J Cancer* 2010; 47:437-42.
2. Amrikachi M, Ramzy I, Rubinfeld S, Wheeler TM. Accuracy of fine-needle aspiration of thyroid. *Arch Pathol Lab Med.* 2001 Apr; 125(4):484-8.
3. Mehrotra P, Viswanathan H, Johnson SJ et al. Ultrasound guidance improves the adequacy of our preoperative cytology but not its accuracy. *Cytopathology* 2006; 17: 137-44.
4. Chaudhari S, Hatwal D, Bhat P, Batra N, Bhat S. Cytological evaluation of thyroid lesions and its correlation with histopathology: A prospective study. *Int J Sci Stud* 2015; 3(8):132-35.
5. Ritica Chaudhary, Zulfikar Ahmed, Umaru N. A Correlative Study of FNAC Thyroid with Thyroid Hormone Profile. *Journal of Evolution of Medical and Dental Sciences* 2014; Vol.3, Issue 06, February 10; Page 1471-1480, DOI:10.14260/jemds/2014/2010
6. Chandanwale S. et al. Clinicopathological correlation of thyroid nodules. *Int J Pharm Biomed* 2012; 97-102.
7. Poller DN, Stelow EB, Yiangou C. Thyroid FNAC cytology: can we do it better? *Cytopathology*. 2008; 19: 4-10.