International Journal of Clinical and Diagnostic Pathology

ISSN (P): 2617-7226
ISSN (E): 2617-7234
www.patholjournal.com
2021; 4(2): 77-80
Received: 10-02-2021
Accepted: 15-03-2021

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Histopathological and cytological correlation of thyroid lesions

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DOI: https://doi.org/10.33545/pathol.2021.v4.i2b.361

Abstract
Introduction: Fine needle aspiration cytology (FNAC) has become the dominant method in the Evaluation of thyroid nodules, being the fast, reliable, safe and minimally invasive, cost Effective and reaching high sensitivity and Specificity.
Aims and Objectives: The Study was undertaken with the main aim of evaluating the utility and efficacy of FNAC and to study the histopathological pattern of various diseases of thyroid gland.
Materials and Methods: The study was conducted in the Department of Pathology of B.J. Medical College and Civil Hospital, Ahmedabad, during the period between June 2018 to October 2020. Data for study is obtained from departmental records and tissue specimens received in the histopathology and cytology sections section in the specified period of study.
Results: In the present study, 225 cases of Thyroidectomy were received at the Histopathology Section of Pathology Department, BJ Medical College and Civil Hospital, Ahmedabad, during the period between June 2018 to October 2020. Out of these, 190 were non-neoplastic and 35 were neoplastic. Among 35 neoplastic lesions, 28 were benign and 7 were malignant, 120 cases were correlated with FNAC findings. In correlation study, FNAC had 100% accuracy for malignant lesions.

Keywords: FNAC, histopathology, thyroid lesions

Introduction
Fine needle aspiration cytology (FNAC) has become the dominant method in the Evaluation of thyroid nodules, being the fast, reliable, safe and minimally invasive, cost effective and reaching high sensitivity and specificity. FNAC has allowed a dramatic decrease in the surgical treatment of the patients with the thyroid nodular diseases.

Aims and Objectives: The Study was undertaken with the main aim of evaluating the utility and efficacy of FNAC and to study the histopathological pattern of various diseases of thyroid gland.

Material and Methods
The study was conducted in the department of Pathology of B.J. Medical College and Civil Hospital, Ahmedabad, during the period between June 2018 to October 2020. Data for study is obtained from departmental records and tissue specimens received in the histopathology and cytology sections section in the specified period of study. Out of 225 cases, cytological findings of 120 cases were available. Cytological and histopathological correlation of these 120 cases was performed. Patients in whom either of one HPE /FNAC was not available were excluded.

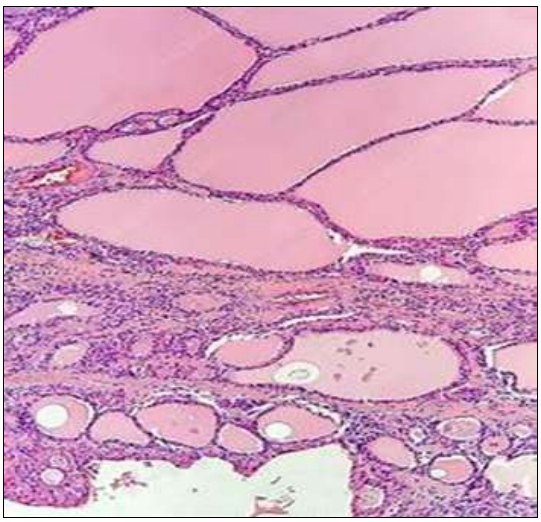

Fig 1: Colloid goitre

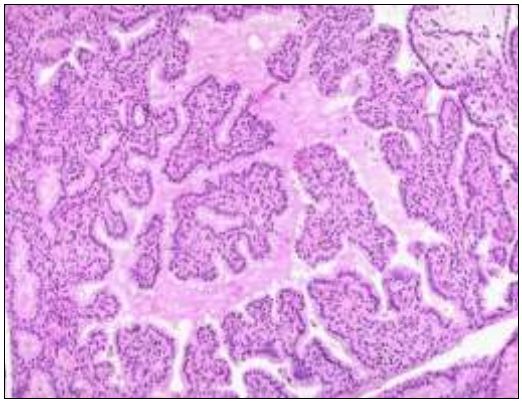

Fig 2: Diffuse toxic goite

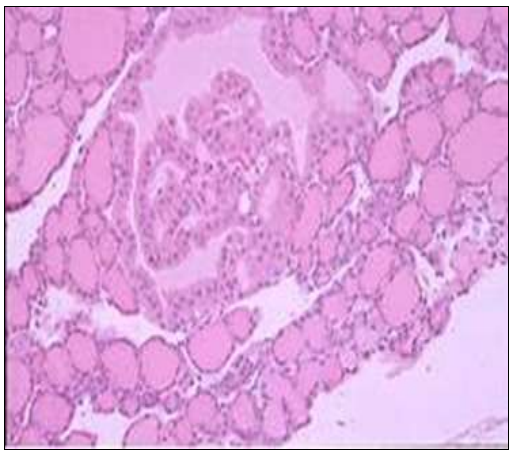

Fig 3: Adenomatous (Hyperplastic goiter)

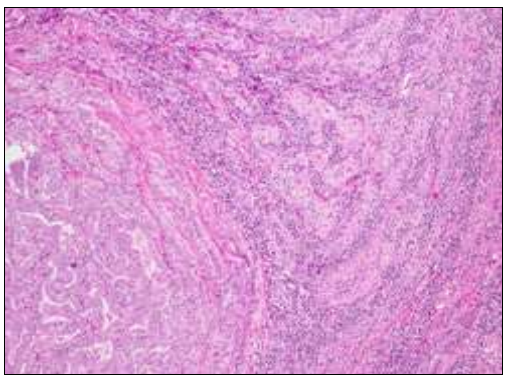

Fig 4: Hashimoto thyroiditis

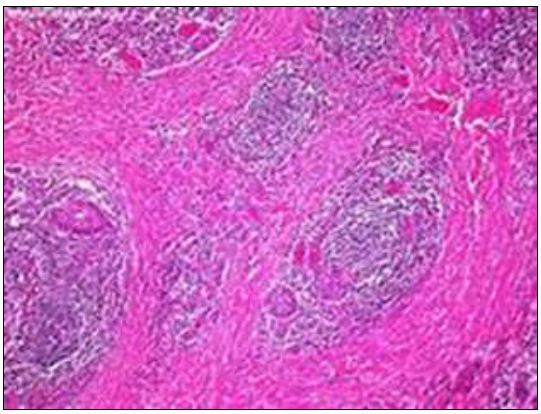

Fig 5: Follicular variant of Hashimoto thyroiditis

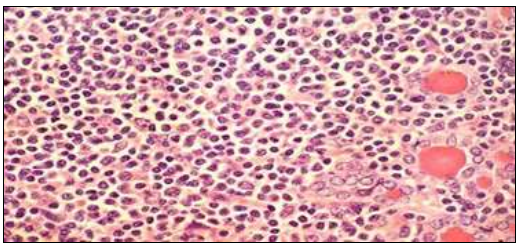

Fig 6: Lymphocytic thyroiditis

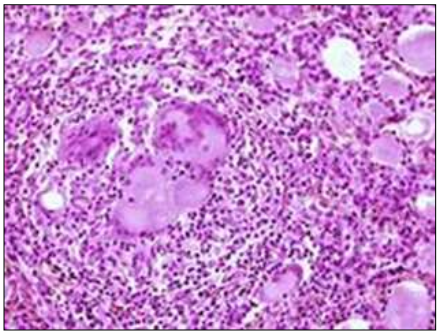

Fig 7: Granulomatous thyroidits

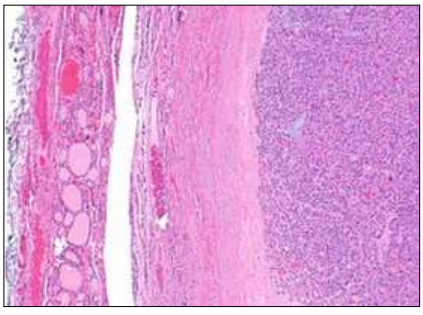

Fig 8: Follicular Adenoma

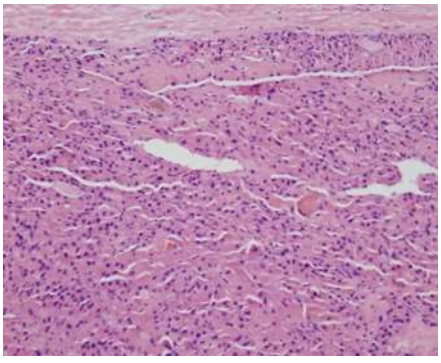

Fig 9: Hurthle cell adenoma

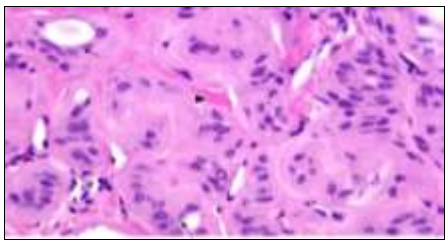

Fig 10: Hyalinizing Trabecular adenoma

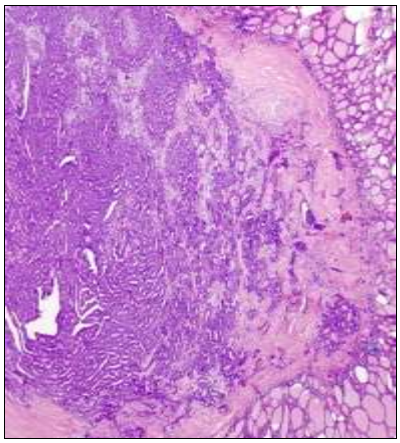

Fig 11: Papillary thyroid carcinoma

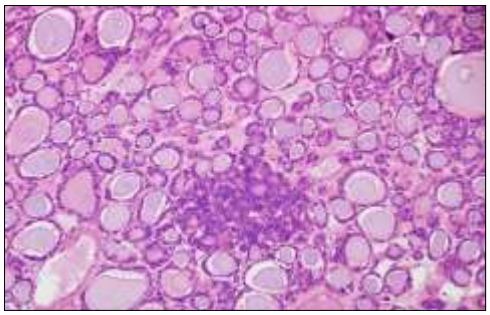

Fig 12: Follicular variant of papillary thyroid carcinoma

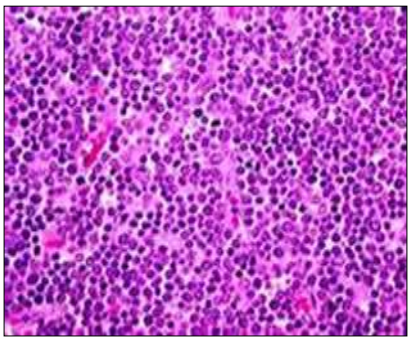

Fig 13: Non Hodgkin lymphoma

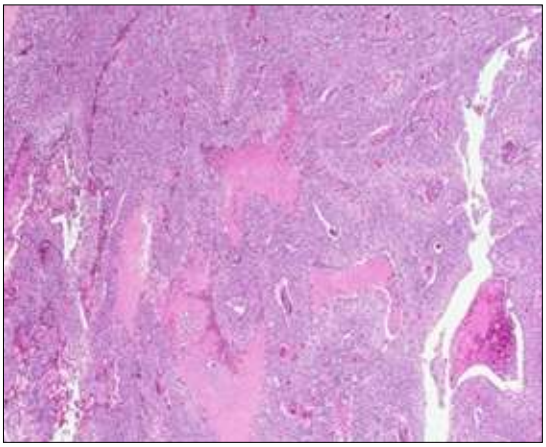

Fig 14: Poorly differentiated thyroid carcinoma

Observations and Result

In the present study, 225 cases of thyroidectomy were received at the histopathology section of pathology department, BJ Medical College and Civil Hospital, Ahmedabad, during the period between June 2018 to October 2020. Out of these, 190 were non-neoplastic and 35 were neoplastic. Among 35 neoplastic lesions, 28 were benign and 7 were malignant.

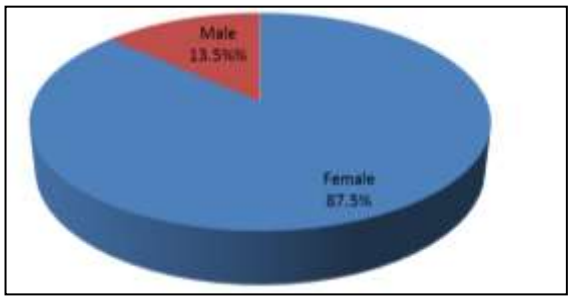

Fig 15: Distribution of Lesions according to Gender

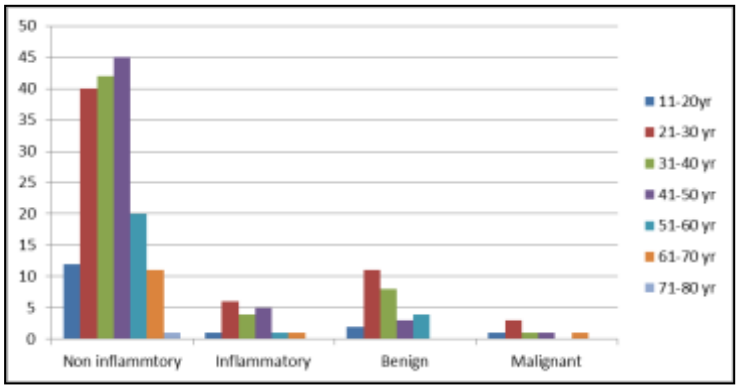

Fig 16: Distribution of cases According to age

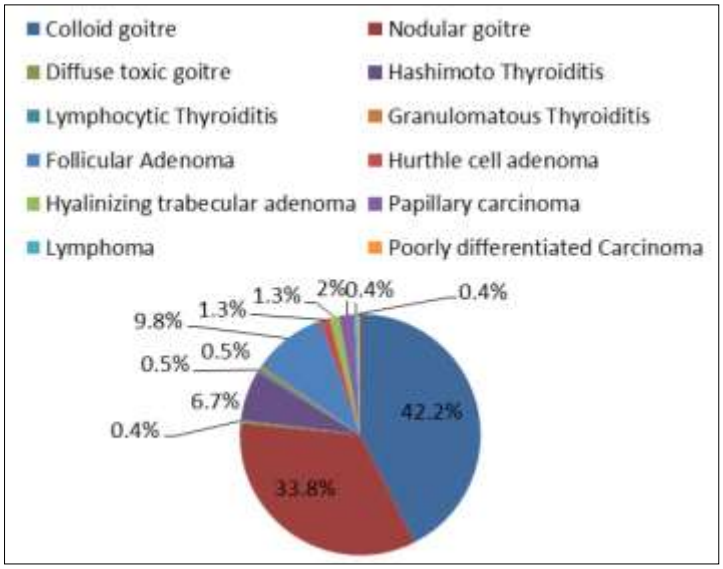

Fig 17: Histodiagnosis of Thyroid gland lesions

Table 1: Correlation between histodiagnosis and cytodiagnosis of thyroid lesions

		Diagnosis	No of cases of histodiagnosis	No of cases of cytodiagnosis	Correlation
Non neoplastic lesions	Non inflammatory (hyperplasia)	Colloid and nodular goiter	93	113	82.3
		Diffuse goiter	1	1	100
	Inflammatory	Hashimoto thyroiditis	6	3	50
		Lymphocytic thyroiditis	1	0	0
		Granulomatous thyroidits	1	0	0
Neoplastic lesions		Follicular neoplasm	10	3	30
		Hyalinizing trabecuar Adenoma	3	0	0
		Hurthle cell adenoma	2	0	0
		Papillary carcinoma	3	0	0
Total			120	120	

Discussion

Diseases of thyroid are of great importance because they are most amenable to medical or surgical management. Single nodules are about four times more common in women than in men. In fact benign lesions out number thyroid carcinomas by a ratio of nearly 10:1. Overall, the incidence of thyroid malignancy is Low, forming 0.5- 1.0 % of all cancers. In Present study, the age of patients ranged from 16-72 years and maximum number cases were seen in age group of 21-40 years. Out of 225 Cases, only 34 (15.5%) occurred in males and remaining 190 (84.4%) cases were in female. The M:F ratio is 1:5.4In the present study, the most common non Inflammatory thyroid lesion was colloid goiter follicular adenoma was the most common benign neoplastic thyroid lesion and papillary thyroid carcinoma(PTC) the most common malignancy. After exclusion of the follicular Variants of other tumors, *Follicular carcinoma* (FC) becomes relatively a rare tumor, it Accounts for 10-15% of clinically evident Thyroid malignancy. Medullary thyroid Carcinoma (MTC) comprises 5-10% of all Thyroid malignancies.

Conclusion

The study comprised of 225 cases of thyroid Lesions. The surgical specimens were then evaluated histopathologically and 120 cases were correlated with FNAC findings. Based on the study, following conclusions were drawn.

- The age group of patients ranged from 16-72 years, with a mean age of 36.2 years. M:F ratio in the study was 1:5.4.
- We encountered 190 non-neoplastic masses and 35 neoplastic masses. Among 35 neoplastic lesions, 28 were benign and 7 were malignant.
- The most common type of inflammatory lesion was Hashimoto thyroiditis (15 cases 83.3% of total inflammatory lesion cases.
- Incidence rate of non inflammatory lesions was 76.4%. The most common histopathological subtype of hyperplastic lesion was colloid goiter.(95 cases, 55.2%of the total hyperplastic lesion)
- Incidence rate of benign lesion was 12.4% and of malignant was 7%.
- In correlation study, FNAC had 100% accuracy for malignant lesions.

References

1. Robbins Cotran. South asia edition, 2, chapter 24.
2. Orell and Sterrett's. Fine needle aspiration cytology, 5th edition, Chapter 6.
3. Tsegaye B, Ergete W. Histopathologic pattern of thyroid disease, East Arf Med J 2003;80:525-528.
4. Chandanwale S, Singh N, Kumar H, Pradhan P, Gore C, Rajpal M. Clinicopathological correlation of thyroid nodules 2012;3:97-102.
5. Gole S, *et al*. Profile of thyroid neoplasms: A hospital based 12 year Longitudinal study, the internet Journal of Pathology 2013-14;1:1-13.