



A Study of Pathological Evaluation and Management of Thyroid Nodule in Western Rajasthan

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ABSTRACT

Background: *The diseases of thyroid from a major share of head and neck surgery. Clinical examination although very accurate in most cases, is inadequate in most areas especially in staging of thyroid malignancies and in detecting the multi nodularity of the gland.*

Methods: *this is Cross sectional record based study.12 months (August 2015 to July 2016) at Dept.of Surgery, S.P. Medical College and P.B. M Hospital, Bikaner.*

Results: *Majority (90%) patients were Benign and 10% patients were malignant. Maximum 64% patients were operated with hemithyroidectomy whereas 16% had nodule excision and 14% were operated with total thyroidectomy. 8% patients had near total or subtotal thyroidectomy. 4% had total thyroidectomy with MRND and only 2% had isthmectomy.*

Conclusion: *Most of thyoid swelling were benign.*

Keywords: *Thyroid Swelling; Goiter; FNAC.*

INTRODUCTION

The diagnosis of thyroid lesions using aspiration cytology was first reported by Martin and Ellis in 1930¹. The routine use of fine needle aspiration cytology (FNAC) in the assessment of thyroid nodules has reduced the number of patients subjected to thyroidectomy for benign diseases of the thyroid.^{2,3,4} As a result, the incidence of malignancy at thyroidectomy has increased from 5-10% to 30-50% in the recent years.^{5,6} This relatively simple procedure has assumed a dominant role in determining the management of patients with thyroid nodules.^{7,8} However, the success of FNAC is contingent upon several

important contributing influences including aspirator experience^{9,10,11}, skillful cytological interpretation and a rational analysis based upon a synthesis of cytological and clinical information in the context of an individual patient^{10,11}.

Solitary thyroid nodule still remains a mystery for surgeons and pathologists in these days of recent advances, because of the variations in pathological findings presented by it. Sometimes it causes no symptoms and is very small clinically but turns out to be fatal because of its highly malignant nature. On other hand clinically a large solitary nodule, after its removal proves to be benign pathologically. Thus it displays a great variety in

its ultimate outcome though clinical presentation remains same each time.

MATERIAL AND METHODS

Study Design: Cross sectional record based study.

Study Duration: 12 months (August 2015 to July 2016).

Study Place: Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

Study Population: All patients reporting with thyroid swelling

Sample Size: 50 patients reporting to the Surgery dept. within study duration and eligible as per inclusion criteria were included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria

- Patients admitted with complaint of thyroid swelling.

Exclusion Criteria

- Children with neck swelling (below 10 year).
- Head & Neck swelling other than thyroid origin
- Patients refusing for investigation/management

Data Analysis

The information thus collected was entered into Microsoft excel sheet thereafter with help of SPSS 22.0 data were analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test wherever required.

RESULTS

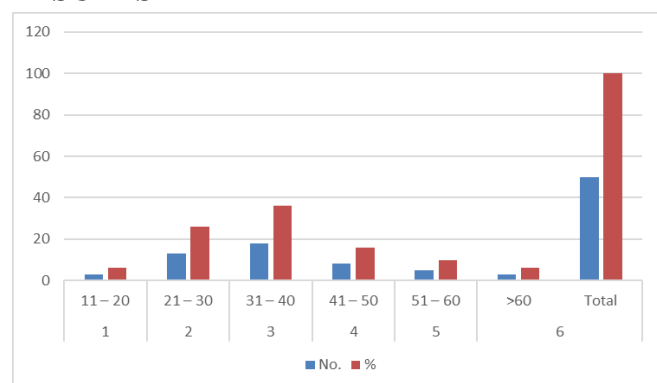


Fig.1: Distribution of study population according to Age

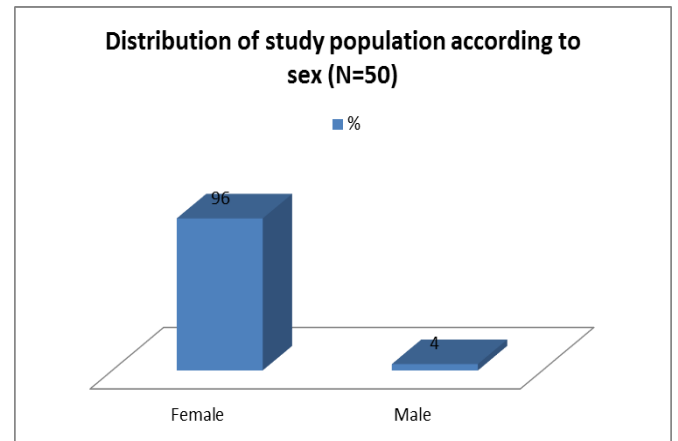


Fig.2: Distribution of Study Population according to Sex

Table-1: Distribution of study population according to FNAC report

S.N.	FNAC	No.	%
1	Benign	45	90
2	Malignant	5	10
	Total	50	100.0

Table-1. shows that majority (90%) patients were benign and 10% patients were malignant.

Table-2: Distribution of study population according to Histopathology report

S.N.	Histopathology	No.	%
1.	Benign	45	90
2.	Malignant	5	10
3.	Papillary Ca.	4	8
4.	Follicular Ca.	1	2
5.	Medullary Ca.	0	0
6.	Malignant Lymphoma	0	0
7.	Anaplastic	0	0

Table-2 shows that among 50 cases, 90% were diagnosed with benign swellings whereas 10% had malignant swellings. Out of 10% malignant swellings, 8% had papillary carcinoma and 2% had follicular carcinoma.

Table-3: Thyroid Profile according to Histopathology.

Histopathology	TFT						Total	
	Euthyroid		Hypothyroid		Hyperthyroid			
	No.	%	No.	%	No.	%	No.	%
Benign	31	68.89	12	26.67	2	4.44	45	90
Malignant	3	60.0	2	40.0	0	0.0	5	10
Total	34	68.0	14	28.0	2	4.0	50	100.0

Table-3 shows thyroid profile status of patients according to histopathology report. Benign swellings were more prevalent among euthyroid patients (68.89%). Malignant swellings were also

more prevalent among euthyroid patients (60.0%). The statistical association between thyroid profile and sex of study participants was found to be statistically insignificant ($\chi^2=9.753$, $df=2$, $p<0.05$).

Table-4: Distribution of study population according to Procedure Performed.

S.N.	Procedure	No.	%
1	Hemithyroidectomy	32	64
2	Near Total/Sub Total thyroidectomy	4	8
3	Total thyroidectomy	7	14
4	Nodule excision	4	16
5	Total thyroidectomy with MRND	2	4
6	Isthmectomy	1	2
	Total	50	100.0

Table-4 shows that maximum 64% patients were operated with hemithyroidectomy whereas 16% had nodule excision and 14% were operated with total thyroidectomy. 8% patients had near total or subtotal thyroidectomy. 4% had total thyroidectomy with MRND and only 2% had isthmectomy.

DISCUSSION

In present study, maximum 36% belonged to 31-40 years age group followed by 26% individuals in 21-30 years age group. Similar findings were observed by Borgohain R et al(2013)⁵⁰ in a cross sectional study in the department of ENT – Head and Neck Surgery, Guwahati Medical College & Hospital, Guwahati, Assam, from January 2012 to December 2013 (2 years). In this series of 122 thyroid swellings, patients were grouped in age groups of 0-20; 21-40; 41-60 and 61-80 years & patients in each age group were 9%; 50%; 37% and 4% respectively. Most of the patients were in the age group of 21-40 years. Whereas Srivastava C et al (2015)¹³ found that most common age group affected was 51-60 years followed by 41-50 years and RajnishN et al (2015)¹⁴ found that out of 16933 cancer patients, 128 patients suffered from thyroid disorders and the prevalence of thyroid disorders was significantly higher in higher aged

(>31 years) patients as compared to lower aged (>30 years) patients (14.1% vs. 85.9%, $\chi^2=132.30$, $p<0.001$). Similarly in the present study, when thyroid profile of patients was studied according to their age, most patients in all age groups were euthyroid, the statistical association between thyroid profile and age of study participants was found to be statistically significant ($\chi^2=16.679$, $df=10$, $p<0.05$).

In the present study, 96% were females and 4% were males whereas Thomas T et al (2014)⁵¹ observed that in 144 patients with cytological proven HT/lymphocytic thyroiditis, 90% of the patients were females and most of them presented within five years of onset of symptoms.

In the present study, 64% patients were operated with hemithyroidectomy whereas 16% had nodule excision and 14% were operated with total thyroidectomy. 8% patients had near total or subtotal thyroidectomy. 4% had total thyroidectomy with MRND and only 2% had isthmectomy. 84% patients were having pain as prominent post operative symptom followed by 24% patients who experienced cough, 16% having carpopedal spasm, 14% having dysphagia and a few patients reported hoarseness (2%) and cramps

(4%) also. 78% patients faced no problem post operatively, 22% developed hypothyroidism, 18% developed hypoparathyroidism, 10% developed hypertrophic scar on site of surgery. Recurrent laryngeal nerve palsy as well as hematoma was seen in 2% patients each. None of the operated cases reported wound infection. Among 50 cases, 88% had negative suction drain removal within 4-6 post operative day. 96% patients stayed in hospital for <7 days. 78% of 50 patients had experienced no post operative complications whereas 22% faced one or the other complications. The statistical association between age group and occurrence of post-operative complications was found to be statistically insignificant ($\chi^2=0.423$, $df=5$, $p>0.05$). Goel MM et al¹⁵ concluded that FNAC alone was sufficient for the diagnosis of cutaneous metastases of thyroid carcinoma, thus eliminating the need for confirmatory surgical biopsy and immunohistochemistry.

CONCLUSION

Majority (90%) patients were Benign and 10% patients were malignant and Maximum 64% patients were operated with hemithyroidectomy whereas 16% had nodule excision and 14% were operated with total thyroidectomy. 8% patients had near total or subtotal thyroidectomy. 4% had total thyroidectomy with MRND and only 2% had isthmectomy.

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