

Review Of Clinical And Etio-Pathology (Sonological & Cytological) Of Mass Lesions Of Thyroid In Government Ent Hospital

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Abstract.

Aim Of Study:

- 1.To know the incidence in Sex and Age groups,of thyroid mass lesions
- 2.To know the incidence of different pathological variants in our population
- 3.To update the demand of different type of gadgets for both diagnostic and therapeutic purposes.

Materials And Methods:

Government ENT Hospital, Visakhapatnam is a Tertiary referral hospital to Coastal Andhra Pradesh with five districts. This study was conducted from October 2016 to September 2017 for a period of one year.

Observation: Out of 526 patients attended with mass lesions of neck, 90 cases with thyroid swellings were considered for this study. The male and female ratio observed was 1:7.2. and the commonest age group affected were 20 to 40 years. The commonest lesion was the multinodular goitre.

Conclusion: Multinodular goiter was evolved to be the commonest lesion, later were the Adenomas, Hashimoto's lymphocytic thyroiditis and last was Carcinoma of thyroid, in which Papillary variety was more common than follicular and anaplastic type.

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I. Introduction

As the neck mass lesions are increasing in population day by day due to different qualities of food habits, the water available in particular area which is having different minerals and salts like Iodine, and other unknown reasons. The consciousness of health among people is increased due to a campaign by media regarding health education and awareness of cosmetic appearance.

The thyroid mass lesions are more common in females than males. It can occur at any age from commonly from 5 to 75 years. It is mostly seen in adults, even though physiological uniform thyroid enlargement is seen in children and adolescents in some cases. The mass lesions of Thyroid are the commonest among the total neck swellings. These include both specific and non-specific thyroiditis and benign mass and cystic lesions and malignant tumors. Some times a lymphodal mass may appear first with an occult primary in thyroid.

Anodular goiters may present as a single nodule or multiple nodules. In the inflammatory category the commonest is the Hashimoto's thyroiditis. Follicular adenomas are more common in the benign tumors group and the last variety is carcinoma thyroid. The rarest are toxic multinodular goitre, later primary Graves disease and metastatic carcinoma.

Thyroid swelling may present as a localized single swelling like acyst or solitary nodular in goiter or like an adenoma. It can also present as irregular multiple masses which include both nodular and cystic masses as in multi nodular goitre. Uniform butterfly like swelling of different sizes are seen in thyroiditis and physiological goitre.

Thyroid is only endocrine organ where the malignant tumours can occur in children, young and middle age. Thyroid cancers are more common in females. Pain is the rare complaint and is seen in anaplastic carcinoma. Dyspnea, stridor, dysphagia are more seen in malignancy. Positive family history may suggest the medullary carcinoma.

Even though mostly thyroid swellings are with euthyroid status, very few may present with Hypothyroidism or hyperthyroidism.

II. Material And Methods

The study was conducted in Government ENT Hospital Visakhapatnam which was a Tertiary referral hospital in Andhra Pradesh, during October 2016 to September 2017 for a period of 12 months. The number of out patients attended were about 38,400 during the above period. 526 number of patients were attended with complaint of neck swellings and 6 patients were identified with thyroid swelling who came with other ENT complaints. The total number of patients identified with thyroid swellings who has given consent were 90 which were included in our study. The number of patients underwent surgery after consent were 82.

These patients were divided into male and female groups, and also distributed into groups according to age variation. In the above 90 patients, the history of the onset, progression and duration of the swelling were taken. In all patients the routine ENT clinical examination including the number of swellings, consistency including cystic, mobility and fixity were observed. There was unilateral vocal cord paralysis in 2 patients. Routine laboratory investigations including T3 T4 TSH, Fine Needle aspiration cytology, Ultra sound scan of neck, X ray of neck, CT scan if necessary were done. In all these patients, where surgery were performed, the excised specimens were sent for Histopathological examination.

The number of patients identified with euthyroid were 77, with hypothyroidism were 11 and with hyperthyroidism were 2. In the hypothyroidic patients, treatment with tab. thyroxine was given to attain euthyroid status before the surgery. Patients with hyperthyroidism were referred to endocrinologists for medical line of management.

Inclusion Criteria

all the patients with thyroid swelling were included.

Exclusion Criteria

- 1. Physiological goiter
- 2. Neck masses with occult primary in thyroid.

III. Results And Observation

INCIDENCE IN SEX

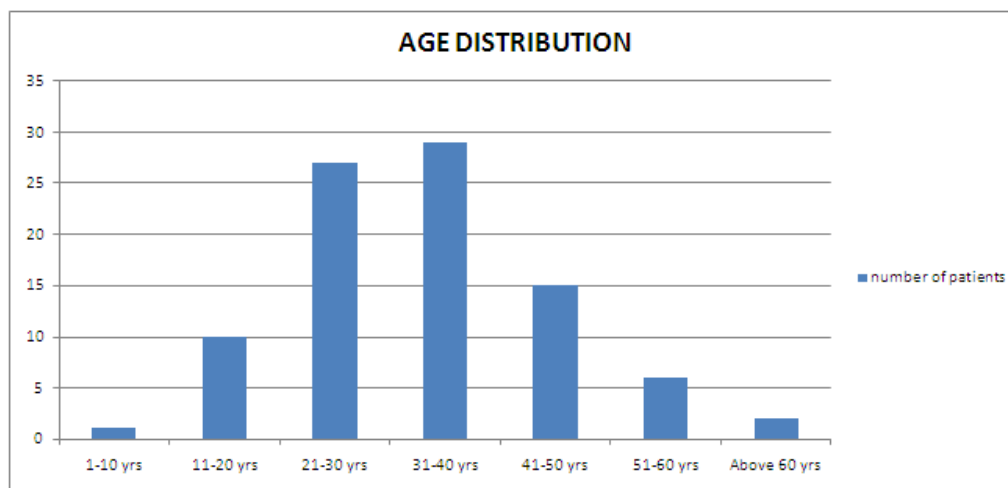
S.NO	SEX	No. of patients	Percentage %
1	Male	11	12.2%
2	Female	79	87.8%

Among the total 90 patients females were 79 (87.8%) which shows the female predominance in thyroid swellings and males were 11 (12.2%).

The male and female ratio- **1 :7.2.**

INCIDENCE IN AGE GROUP

S.NO	AGE	No. of patients	Percentage %
1	1-10 yrs	1	1.1%
2	11-20 yrs	10	11.1%
3	21-30 yrs	27	30%
4	31-40 yrs	29	32.2%
5	41-50 yrs	15	16.7%
6	51-60 yrs	6	6.7%
7	Above 60 yrs	2	2.2%



The commonest age group affected was 31-40 years with 29(32.2%)patients, the second common age group involved was 21-30years with 27 (30%) patients. Out of all, the above two age groups were highly affected together constitute 56(62.2%). The age group leastaffected was 1-10 years with 1(1.1%) patient.

CLINICAL AND SONOLOGICAL DIAGNOSIS OF THYROID SWELLING

S.NO	TYPE	NUMBER	PERCENTAGE
1	MultinodularGoitre	66	73.3%
2	Adenoma	11	12.2%
3	Hashimoto’s thyroiditis	8	8.9%
4	Carcinoma thyroid	5	5.6%

After through clinical and sonological examination multinodulargoitre was evolved the commonest thyroid swelling in the study group with number 66 (73.3%) ,later were the adenoma 11(12.2%) and the hashimotos thyroiditis 8(8.9%) .carcinoma of the thyroid was the least common type with 5 (5.6%)cases

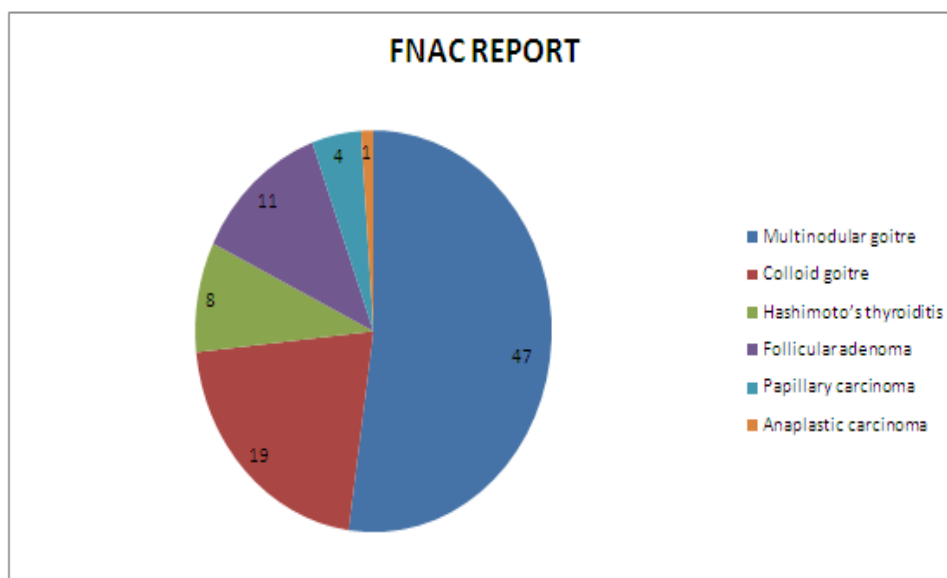
TYPE OF THYROID STATUS-

S.NO	THYROID STATUS	NO. OF PATIENTS	PERCENTAGE
1	Euthyroid	79	87.8%
2	Hypothyroidism	11	12.2%
3	Hyperthyroidism	0	0%

In all cases T3 ,T4 , TSH were estimated . Out of 90 cases , euthyroid condition is present in 79(87.8%) patients .In 11(12.2%) patients hypothyroidism was noticed and made euthyroid by giving thyroxine before surgery.

TYPE OF THYROID SWELLING-BY FNAC

S.NO	FNAC REPORT	NUMBER OF CASES	PERCENTAGE
1	Multinodulargoitre	47	52.2%
2	Colloid goitre	19	21.1%
3	Hashimoto’s thyroiditis	8	8.9%
4	Follicular adenoma	11	12.2%
5	Papillary carcinoma	4	4.4%
6	Anaplastic carcinoma	1	1.1%



The total number of cases performed with FNAC were 90. Among the above non-neoplastic masses were 74 (82.2%) and neoplastic masses were 16(17.8%). In the non-neoplastic masses multinodulargoitre were 47(52.2%) ,with colloid goitre were 19 (21.1%) and with Hashimoto’s thyroiditis were 8(8.9%). In the neoplastic variety the follicular adenomas were 11(12.2%) and papillary carcinoma were 4 (4.4%) ,at the least was anaplastic carcinoma in 1(1.1%) patient.

Histopathological Diagnosis –in 82 post operative patients.

S.NO	HISTOPATHOLOGICAL DIAGNOSIS	NUMBER OF CASES	PERCENTAGE
1	Multinodular goiter	47	57.4 %
2	Colloid goiter	19	23.3 %
3	Follicular adenoma	10	12.1%
4	Papillary carcinoma	4	4.8%
5	Follicular carcinoma	1	1.2%
6	Anaplastic carcinoma	1	1.2%

Total number of patients undergone thyroid surgery ,after taking the consent were 82 All the above 82 post operative specimens were sent for histopathological examination . The 8 patients with Hashimoto’s thyroiditis were managed with medical treatment.

In the above the results of histopathological examination of total 82 patients , non neoplastic lesions were found in 66patients and neoplastic lesions were reported in 16 patients. Out of these non-neoplastic lesions, 47 patients had multinodular goitre and 19 patients with colloid goitre .In neoplastic lesions, follicular adenomas were confirmed in 10 patients ,where as papillary carcinoma in 4 patients . The follicular carcinoma and anaplastic carcinomas were identified as one patient in each .

Out of 11 cases of follicular adenoma reported in the FNAC ,one was diagnosed as follicular carcinoma on histopathological examination .

IV. Discussion

In the affected thyroid swelling population the females were 79(87.8 %) more than males 11 (12.2%), indicating the female preponderance ,the same was found in the study of UP Santosh et al.¹

Age groups 31- 40 years with 29 (32.2%) patients was commonly presented with thyroid swelling later was the 21 – 30 years with 27 (30%) patients. The least affected age group was 1- 10 years ,1 (1.1%) patient ,the results were similar to Venkates et al.²

In clinical and sonological examination the multinodular goitre(73.3%) evolved as the commonest thyroid swelling, later was adenoma (12.2%) and Hashimoto’s thyroiditis (8.9%). The carcinoma of thyroid was found to be least (5.6%)^{3,4,5}

Among the swellings of thyroid , euthyroid status was found in 79(87.8%) and hypothyroid condition was seen in 11(12.2%)patients.² In FNAC study multinodular goitre (52.2%) recognized as the commonest. later were colloid goitre (21.1%), follicular adenoma (12.2%) and Hashimotos thyroiditis (8.9%). The less commonly affected were papillary carcinoma (4.4%) and the least common was anaplastic carcinoma (1.1%).^{6,7,8}

Comparison of neoplastic and non neoplastic lesions of various studies:^{6,7,8}

Study	No of cases	Non -neoplastic	Neoplastic
Kessler et al	170	100	70
Tabaqchali et al	239	145	94
Uma Handa et al	66	54	12
Present study	90	74	16

All the thyroid swellings should be evaluated with the ultrasonography examination which was to rule out other neck masses and to differentiate the type of thyroid lesion like cystic ,nodular ,degenerative changes , exact site and size of the lesion.

In histopathological examination multinodular goitre(57.4%) was found to be the commonest later were colloidal goitre (23.3%) and the benign follicular adenoma(12.1%) last were the carcinoma thyroid like papillary carcinoma (4.8%), follicular carcinoma (1.2%) and the anaplastic carcinoma (1.2%)^{8,9}.

V. Conclusion

In our population with mixed dietary habits, the multinodular goitre has evolved to be the commonest swelling of the thyroid. The second most common thyroid swelling was the adenoma which present as a solitary nodule. Hashimoto’s thyroiditis observed as in third position and carcinomas were the least common affected.. At the end hyperthyroid toxic goitre and metastatic carcinoma in thyroid are the rarest swellings found.

References

- [1]. UP Santosh , KB Sunil Kumar, MC Trupthi , S.Boobalan , A Comprehensive approach to thyroid swellings :clinical ,sonological ,cytological and histological correlation .Otolaryngology clinics,An international journal ,2014, (2), 28 – 31
- [2]. Venkates T.K,Vignesh V.V,Subrahmanian C.S, Viswanathan ;A Clinicopathological study of thyroid swellings;CIB Tech, J , 2015 vol .4 (3) ,sep to dec .pp 1- 8 .

- [3]. Papini E, Guglielmi R, Bianchini A, Crescenzi A, Taccogna S, Nardi F, et al. Risk of malignancy in nonpalpable thyroid nodules: predictive value of ultrasound and color-Doppler features. *J Clin Endocrinol Metab* 2002;87(5):1941–6. [PubMed: 11994321]
- [4]. Fish SA, Langer JE, Mandel SJ. Sonographic imaging of thyroid nodules and cervical lymph nodes. *Endocrinol Metab Clin North Am* 2008;37(2):401–17. ix. [PubMed: 18502334]
- [5]. Hegedus L. Thyroid ultrasound. *Endocrinol Metab Clin North Am* 2001;30(2):339–60. viii–ix. [PubMed: 11444166]
- [6]. Tabaqchali MA, Hanson JM, Johnson SJ, Wadhera V, Lennard TW, Proud G. Thyroid aspiration cytology in Newcastle: a six year cytology/histology correlation study. *Ann R Coll Surg Engl* .2000; 82(3):149-55.
- [7]. Kessler A, Cavriel H, Zahav S, Vaiman M, Shlamkovitch N, Segal S et al. Accuracy and Consistency of Fine Aspiration Biopsy in the Diagnosis and Management of Solitary thyroid Nodules. *Isr Med Assoc J* .2005; 7(6):371-373.
- [8]. Handa U, Garg S, Mohan H, Nagarkar N. Role of fine needle aspiration cytology in diagnosis and management of thyroid lesions: A study on 434 patients. *J Cytol*. 2008;25:(1)3-7
- [9]. Sidawy MK, Del Vecchio DM, Knoll SM. Fine-needle aspiration of thyroid nodules: correlation between cytology and histology and evaluation of discrepant cases. *Cancer* 1997;81(4):253–9. [PubMed: 9292740]

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