



“THYROMEGALY” – OUR EXPERIENCE

ENT

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ABSTRACT

Thyroid swelling is also called as Goitre. It can occur both in males and females, with preponderance in the later. Most of the thyroid swellings are benign, but nearly 5% can be malignant. The main aim of a surgeon is to rule out malignancy and decide whether to manage medically or go forward with surgery. This article can allow us to have an insight of various thyroid diseases and their management protocols. **Results:** In our study Multinodular goitre was commonly observed in females. Multinodular goitre is commonly observed in 3rd decade of life. **Conclusion:** In most of the cases one can diagnose number of nodules clinically. However ultrasonography has an important role in detecting actual number of nodules. This information is very essential for further investigations and necessary management. Pre operative evaluation with ultrasound and FNAC can minimize the extent of surgery to be performed. Hemi thyroidectomy, subtotal and near total thyroidectomy are the safe surgical procedures than total thyroidectomy to prevent the permanent post surgical complications. Malignancy can still come as a surprise on postoperative histopathological examination which is dealt by completion thyroidectomy and post op irradiation.

KEYWORDS

Goitre, Thyroid, Swelling, Thyroidectomy, Thyroid Hormone

INTRODUCTION:

Thyroid gland is an endocrine gland in the neck. It consists of 2 lobes connected by thin isthmus usually located below and anterior to larynx. The weight of normal adult thyroid is approximately 15-25 g. A normal thyroid gland is impalpable. The term goitre is used to describe generalised enlargement of thyroid gland. A multinodular goitre is multiple distinct nodules within the goitre. A discrete swelling in either lobe with no palpable abnormality is termed as solitary nodule.

The etio-pathogenesis of MNG is not very clear. A mild dietary deficiency of iodine, slight impairment of hormone synthesis, increased iodine clearance from kidneys, and the presence of thyroid stimulating immunoglobulins have been suggested as the various causes. Initially, the mass is euthyroid; however, with increasing size, elevations in T3 and T4 can occur and progress gradually into clinical hyperthyroidism.

Ultrasonography and radio isotope scanning demonstrate heterogenous thyroid substance. Nodules with poor intake can present as lesions suspicious for malignancy.

Fine needle aspiration cytology (FNAC) for diagnosis and resection of suspicious lesions should be considered. Hyperthyroidism may be adequately controlled by drugs, but surgical management is the preferred treatment. Subtotal or total thyroidectomy may be performed depending on the involvement of thyroid gland and specimen sent for HPE (histo-pathological examination). Radioactive iodine therapy is reserved for elderly individuals who have a poor operative risk. The complications of thyroid surgeries are haemorrhage, respiratory obstruction, vocal cord paralysis, hypo-parathyroidism, thyroid insufficiency, thyrotoxic storm and wound infection.

AIMS AND OBJECTIVES

AIM:

- To Correlate between clinical, pathological and radiological findings of multinodular swellings of thyroid.

OBJECTIVES:

- To determine the incidence of malignancy in multinodular thyroid swellings.
- To determine the incidence of autoimmune thyroiditis in multinodular thyroid swellings.
- To determine the incidence of multinodular thyroid swelling in relation to age and sex.
- To study the incidences of euthyroid, hypothyroid or hyperthyroid states in patients presenting with multinodular thyroid swelling.

MATERIAL AND METHODS:

Study Site:

Bhaskar General Hospital, Yenkapally, Ranga Reddy district.

Study Population:

Patients with multinodular thyroid swellings admitted in ENT wards and O.P in Bhaskar general hospital, Yenkapally.

Study Design:

Prospective, observational, interventional study.

Study Sample:

The study of minimum 50 cases admitted to ENT wards and OP.

Study Period:

18 months (January 2023–June 2024).

METHODS OF COLLECTION OF DATA:

Data collection by case history, examination, investigations, operative

findings, histopathological report and follow-up of cases.

INVESTIGATIONS:

Special investigations:

- Plain X-ray neck (lateral view)
- Video laryngoscopy
- Thyroid profile
- Ultra sound examination of neck
- FNAC of multi nodular swelling of thyroid.
- Histopathological examination

Routine Investigations:

- Complete blood picture
- Complete urine examination
- RBS, blood urea and serum creatinine
- Chest x –ray ,ECG,
- HIV, HbsAg.

Inclusion Criteria:

All the patients admitted to ENT wards with clinically palpable multinodular thyroid swellings.

Exclusion Criteria:

- Clinically solitary nodular goitre
- Multinodular goitre with palpable neck nodes.
- Swelling with previous history of malignancy.

Type Of Study:

Prospective and observational study of 50 cases of multinodular swellings of thyroid admitted to ENT ward and OPD.

OBSERVATIONS AND RESULTS

This clinico-pathological study of 50 patients based on the patients attending to outpatient to Department of ENT Head and Neck surgery are studied as follows-

Table .1. Age Distribution

S.No	AGE (In years)	No. of patients	Percentage
1.	1-10	0	0
2.	11-20	0	0
3.	21-30	12	24%
4.	31-40	21	42%
5.	41-50	12	24%
6.	51-60	5	10%

In the present study, majority of the patients fall in the age group of 31-40 years (42%) followed by 41 to 50 years (24%) and 21-30 years (24%).

Table .2. Sex Distribution

	No. of patients	Percentage
MALES	6	12%
FEMALES	44	88%

As seen above, majority of the patients are females. The demands of hormonal requirement in females in their life cycle (puberty, menstrual cycles, pregnancy, menopause), increases the chances of thyroid nodule formation as compared to males.

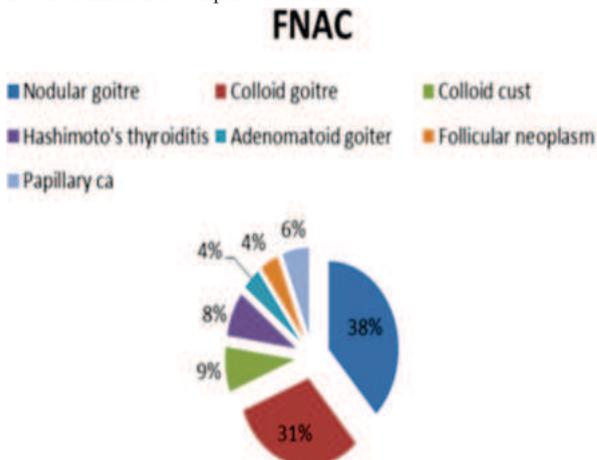


Fig. 1. Showing Results Of Fine Needle Aspiration Cytology

Table.3. Fine Needle Aspiration Cytology

	Cytology	No. of patients	Percentage
1.	Nodular goiter	18	38%
2.	Colloid goiter	16	31%
3.	Colloid cyst	5	9%
4.	Hashimoto's thyroiditis	4	8%
5.	Adenomatoid goiter	2	4%
6.	Follicular neoplasm	2	4%
7.	Papillary carcinoma	3	6%

Fine needle aspirations in our study has majority of non neoplastic lesions (82%) when compared to neoplastic (18%).

Table.4. Ultrasonographic Findings

	Findings	No. of patients	Percentage
1.	Multinodular goiter	14	28%
2.	Micro calcifications	1	2%
3.	Solitary thyroid nodule	31	62%
4.	Cyst	4	8%

Table.5. Thyroid Profile

	Status	No.of patients	Percentage
1.	Euthyroid	50	100%
2.	Hyperthyroidism	0	0
3.	Hypothyroidism	0	0

Table.6. Surgery

	Surgery	No. of patients	Percentage
1.	Lobectomy	4	8%
2.	Right hemi thyroidectomy	12	24%
3.	Left hemi thyroidectomy	19	38%
4.	Subtotal thyroidectomy	12	24%
5.	Total thyroidectomy	3	6%

Table.7. Histopathological Report

	HPE	No. of patients	Percentage
1.	Nodular goiter	24	48%
2.	Colloid goiter	15	30%
3.	Hashimoto's thyroiditis	2	4%
4.	Follicular adenoma	6	12%
5.	Follicular carcinoma	0	0
6.	Papillary carcinoma	3	6%

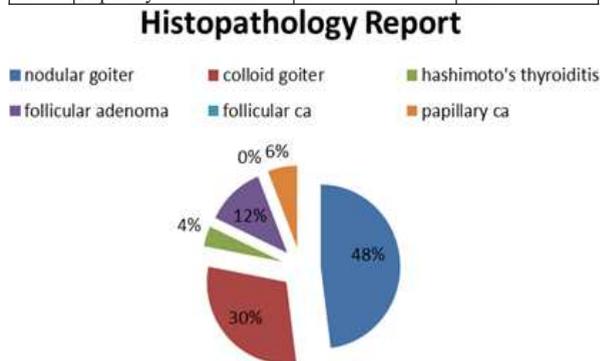


Fig. 2. Showing Reporting Of Histopathological Findings

DISCUSSION

Thyroid gland nodules are widespread clinical findings and have a reported prevalence of 4% to 7% in general adult population.¹ Multinodular goiter (MNG) is one of the most common thyroid problems responsible for 80% to 85% of thyroid pathology.²Thyroid lesion usually present with swelling of thyroid gland with or without hyper or hypo function of thyroid gland. The incidence of thyroid lesions is increasing in recent years.³

Most commonly affected are females accounting for about 44 patients (88%) in our study. Age distribution of our study was comparable to Afroze N et al.⁴ The number of males in this study was 14 (8.8%) and the females were 145 (91.19%) with a male to female ratio were 1:10.

Another study which correlates well with our study results is Bhansal et al. with male: female ratio of 2:7.⁵

The minimum age of presentation in the our study is 22 years whereas

maximum age is 58 years. The mean age of presentation is 36 years. This results goes in accordance with other studies.

AUTHORS	MEAN AGE IN YEARS
Ergete et al ³¹	34.4
Yang et al ³²	37
Present Study	36

Most of the patients with thyroid disease clinically present as swelling in front of the neck. Most of these patients are usually euthyroid, however some may be associated with hypothyroidism or hyperthyroidism. In our study, all patients with euthyroid status were only included in the study. Patients with deranged thyroid function were medically treated to bring back thyroid status to normal.

Apart from clinical examinations FNAC has now supplanted most of the other tests for preoperative evaluation of thyroid nodules.^{6,7} Though MNG are common, yet treatment modalities range from conservative management to surgical resection, so diagnosis & treatment selection requires a detailed history taking, physical examination & specific investigations like Ultrasound, FNAC & Histopathological examination.

FNAC of thyroid is a well established and cost effective diagnostic test for the evaluation of thyroid disorders. It has a central role in the management of thyroid lesions and should be used as an initial diagnostic test. It also contributes significantly to the preoperative investigation of patients with thyroid swellings. The sensitivity and specificity of thyroid gland FNAC reportedly range from 57% to 99% and 90% to 99% respectively.³ USG guided FNAC is known to increase the diagnostic yield in comparison to conventional FNAC.⁹

In our study, 42 cases out of 50 cases were non neoplastic. i.e., 82%. Where as rest were neoplastic. Among the neoplastic FNAC detected follicular neoplasm in 2 cases (4%) and papillary carcinoma in 3 cases (6%). Among the non neoplastic majority were nodular goiter (38%), colloid goiter (31%) and Hashimotos thyroiditis (8%). The distribution was comparable to studies by Kessler etaland Tabaqchali et al.¹⁰

Ultrasonography (USG) or computerized tomography may be helpful in assessing the location and type of lesion. Differentiating cystic from solid swellings of thyroid gland. Also to know about the not so dominant nodules of the thyroid gland. i.e., multinodularity. All patients in our study underwent ultrasonography of thyroid gland, majority of them had multinodularity.

The type of thyroid surgery depends on the size of the thyroid swelling, location of the swelling and fixity to underlying structures. In our study, hemi thyroidectomy (62%) was the common surgery performed followed by sub-total thyroidectomy (24 %) when lesions affect both lobes of thyroid. Near total thyroidectomy and total thyroidectomy are done when whole of the thyroid is involved commonly in long standing case of multinodular goitre affecting the whole gland or in case of malignancy. In our cases, 6% of the patients of papillary carcinoma underwent total thyroidectomy. The surgical complications of thyroid surgery includes superior laryngeal nerve palsy, recurrent laryngeal nerve palsy, hypocalcaemia due to removal of parathyroid gland, secondary haemorrhage and recurrence of malignancy.

In our study, the incidence of papillary carcinoma in multinodular goitre is about 6%. The incidence of follicular adenoma is 12%. Histopathological examination reported as non neoplastic lesions in about 82% and neoplasm in about 18% of the cases. Few cases, nearly 6% reported as non neoplastic lesions in fine needle aspiration cytology turned out to be neoplastic in histopathological examination. Studies like Darwish et al¹¹ stresses on pre-op aspiration cytology missing out neoplasm in some cases, which are later reported in histopathology specimen.¹¹

SUMMARY

A prospective study of 50 patients with multinodular swellings of thyroid admitted in ENT wards and O.P in Bhaskar general hospital, Yenkapally, Rangareddy district during the period from January 2023 to June 2024 has been made and summarised below:

1. In the present study majority of patients fall in the age group of 31-40 years (42%) followed by 41-50 years (24%) and 21-30 years (24%).
2. In our study majority of patients are females (88%) when compared to males (12%).

3. Fine needle aspiration cytology in our study has majority of non neoplastic lesions (82%) when compared to neoplastic lesions (18%).
4. Ultrasonographic findings in our study has majority of solitary thyroid nodule (62%) then multinodular goiter (28%), cyst (8%) and micro calcifications (2%).
5. All the patients in our study are euthyroid (100%).
6. Surgery is the treatment of choice in majority of cases (100%).
7. In majority of patients surgery performed was left hemi thyroidectomy (38%) and then right hemi thyroidectomy (24%), lobectomy (8%) and total thyroidectomy (6%).
8. Histopathological findings in our study has majority of nodular goiter (48%) then followed by colloid goiter (30%), follicular adenoma (12%), papillary carcinoma (6%) and hashimoto's thyroiditis (4%).

CONCLUSION

In our study Multinodular goitre was commonly observed in females. Multinodular goitre is commonly observed in 3rd decade of life. In most of the cases one can diagnose number of nodules clinically. However ultrasonography has an important role in detecting actual number of nodules. This information is very essential for further investigations and necessary management. Pre operative evaluation with ultrasound and FNAC can minimize the extent of surgery to be performed. Hemi thyroidectomy, subtotal and near total thyroidectomy are the safe surgical procedures than total thyroidectomy to prevent the permanent post surgical complications. Malignancy can still come as a surprise on postoperative histopathological examination which is dealt accordingly by completion thyroidectomy and post op irradiation.

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