

A Study on Malignancy in Multinodular Goiter and Thyrotoxicosis

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Abstract:

Objectives: Is to find the incidence of patients with Multinodular Goitre (MNG) and study thyroid gland diseases.

Methods and Materials: Patients with signs and symptoms of multinodular thyroid swelling for a period of 2 yrs in GMKMCH SALEM through proper history taking and clinical examination.

Results: MNG is more common among female with a ratio of 7:1 compared to male and Secondary thyrotoxicosis is seen in 32% (16%) of patients.

Conclusion: Thyrotoxicosis is seen more in malignant patients (40%) than in benign diseases (31%). Incidence of MNG was about 10% and can also occur on post-operative patients.

Keywords: Multinodular goitre (MNG), Benign, Malignant, Thyrotoxicosis.

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I. Introduction

Being an endocrine organ, thyroid gland can enlarge and can be either toxic or nontoxic. The nontoxic goitre in the other hand can be localized or sporadic based on etiological origin. Diseases of thyroid gland especially multinodular are more prevalent in India due to Iodine deficiency. Incidence rate of nodular goitre is more common in female than in male by 7:1 ratio. This study predicts the results by analysis of patients in Government Mohan Kumaramangalam Medical college Hospital, Salem.

AIM

The aim of the dissertation is to find the incidence of Multinodular Goitre and to evaluate the prevalence of malignant thyrotoxicosis in patients observed during a 2 years period.

- To know the principle and management of MNG.
- To find the age incidence and aetiology of thyroid diseases.
- To evaluate the symptoms and prefer diet for cure.

Materials, Methods and Technique

Materials

Evaluation of Patients admitted in GMKCH, Salem during 2 years period with proper clinical examination and history taking.

Inclusion criteria: Only those patients with clinical evidence of multinodular goitre.

Exclusion criteria:

- Primary malignancy.
- Primary thyrotoxicosis.
- Preoperative Nodular thyroid

II. Methods & Techniques

Surgical Technique:

- **Subtotal thyroidectomy:** Patient lies in supine position with 15 degree by sand bag under neck under general anaesthesia with middle thyroid vein ligated sparing blood supply to parathyroid gland.
- **Total thyroidectomy:** Complete removal of thyroid gland with no remnant of any thyroid tissue sparing parathyroid and recurrent laryngeal nerve.

Diagnosis:

Fine needle aspiration cytology:

FNAC is a simple, quick and inexpensive method that is used to sample superficial masses like those found in the neck and is usually performed in the outpatient clinic.

Management of Thyroid carcinoma:

Lymph node dissection: Most of the patients suffer from occlusion of cervical lymph nodes and treated by radio Iodide(I*) treatment whereas in some patients central neck dissection is particularly done due to frequent block while preserving recurrent laryngeal nerve. While contralateral lymph node dissection is mostly avoided due to its less prevalence.

Postoperative complications:

Haemorrhage: It is necessary to open the wound to avoid hematoma and relieve tension.

Respiratory obstruction: Tension developed causes laryngeal oedema.

• **Observation**

As conducted in tertiary hospital GMKCH, following observations were made

Table no.1 Age and gender distribution of the study population Gender classification

Variable	Frequency	Percent
Male	6	12.0
Female	44	88.0
Total	50	100.0

Age classification

Adolescent	1	2.0
Adult	29	58.0
Elders	19	38.0
Old age	1	2.0

From the table its shown that most of the patients were Female rather than being males and based on age majority of the cases were observed in adults.

Table no 2: Distribution of the duration of disease

Duration of disease (yrs)	Frequency	Percent
<1	25	50.0
1-5	20	40.0
5-10	1	2.0
>10	4	8.0
Total	50	100.0

Figure No. 2: Based on duration of the disease

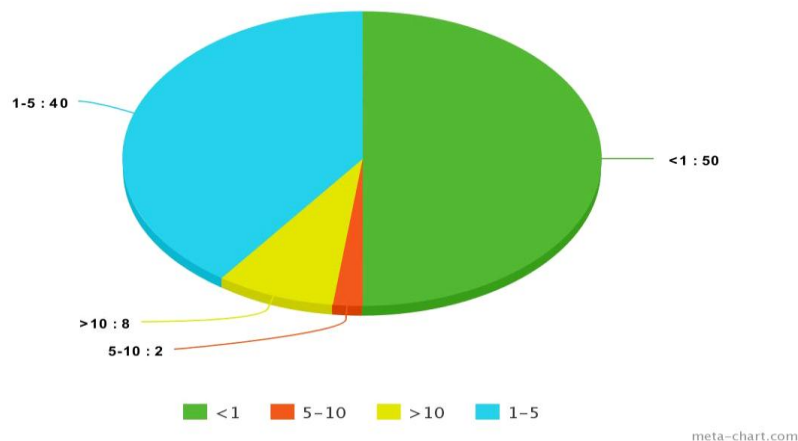


Table No. 3: Mean age and duration of surgery:

Statistics	Age	Duration of disease
Mean	45.18	2.068
Std. Deviation	13.448	3.3891
Minimum	19	.1
Maximum	70	15.0

Table No. 4: Thyroid Profile

TSH	Frequency	Percent
Abnormal	16	32.0
Normal	34	68.0
Total	50	100.0

Table No. 5: Distribution of study group

Surgery	Frequency	percent
Sub Total Thyroidectomy	42	84.0
Total Thyroidectomy	8	16.0
Total	50	100.0

Figure No. 2: Distribution based on study group

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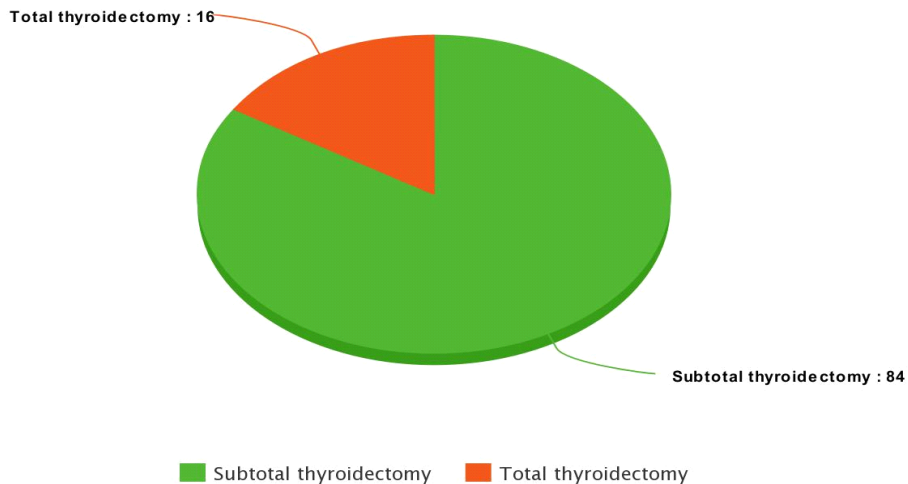


Table No. 6: Distribution based on fine needle aspiration cytology results

Types	Benign	Malignant	Total
Colloid goitre	21	2	23
Hashimoto thyroiditis	5	0	5
Multinodular goitre	3	0	3
Papillary Carcinoma	0	1	1

As shown from the table, colloid goitre and papillary carcinoma appears to be benign and malignant whereas Hashimoto, Multinodular goitre and are usually benign.

III. Results

In our study conducted based on observation of patients for a 2-year period in GMKCH,

- It has been proven that nodular goitre disease is more common in females than males which is about 7:1.
- The new cases observed for thyrotoxicosis is 32% (16 cases) which includes female 12(30%) and 1 male (2%).
- MNG is the most common in our hospital.
- Multinodular goitre is more common in females than in males.
- Incidence rate of MNG was 10%.
- Fine needle aspiration cytology is very useful in diagnosis and management of MNG.
- The complications of the temporary recurrent laryngeal nerve palsy and Temporary tetany is 8%.

- Malignancy can occur as a result of post-operative histopathologic examination and Colloid goitre is the most common condition found in FNAC both as benign and malignant disease.
- Subtotal thyroidectomy is the preferred surgery of choice for Multinodular goitre.

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