

Clinicopathological study of multinodular goiter at a tertiary care hospital in south India – a cross sectional study

Venkata Subba Reddy*

Narayana Medical College & Hospital, Nellore, Andhra Pradesh, India.

Correspondence Address: * Dr. Venkata Subba Reddy (Gen. Surgery), Associate Professor of Surgery, Narayana Medical College & Hospital, Nellore- 524 002, Andhra Pradesh, India.

Abstract

Background: Thyroid gland nodules are widespread clinical findings and have a reported prevalence of 4% to 7% in general adult population multinodular goiter (MNG) is the most common thyroid problems responsible for 80% to 85% of thyroid pathology. I have evaluated clinicopathological profile of multinodular goiter patients visiting to tertiary care hospital.

Methods: The present study was conducted for a period of 2 years at our center SAH & RC, B G Nagar during the period of January 1999 to December 2000. The subjects who were diagnosed with multinodular goiter based on clinical, radiological studies and FNAC, who later underwent surgical excision, were included in the study.

Results: Majority of the patients were between 30-49 years of age (40%). Female: male ratio was about 6:1. Apart from the swelling of the thyroid gland, Majority of the patients presented clinically with palpitations (13.3%) and Commonest surgery performed was Subtotal thyroidectomy (70%) followed by Hemithyroidectomy (26%)

Conclusion: In our study multinodular goiter was commonly observed in female patient population during their 2nd and 3rd decade of life. Major cases were managed by Subtotal thyroidectomy.

Keywords: Thyroid gland, Multinodular Goiter, Subtotal thyroidectomy

Introduction

Thyroid gland nodules are widespread clinical findings and have a reported prevalence of 4% to 7% in general adult population.⁽¹⁻³⁾ Multinodular goiter (MNG) is one of the most common thyroid problems responsible for 80% to 85% of thyroid pathology.⁽⁴⁻⁵⁾ In general, in iodine sufficient countries the prevalence of multinodular goiter is not higher than 4% and 10% of nodular and attributed to lack of nutritional iodine in early adult life⁽⁶⁾ Apart

from clinical examinations FNAC has now supplanted most of the other tests for pre-operative evaluation of thyroid nodules.⁽⁷⁻⁹⁾

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 .

Total thyroidectomy is a safe and effective procedure for benign multinodular goiters in

thyroidectomy (70%) followed by Hemithyroidectomy (26%)

the hands of expert surgeons and that near-total thyroidectomy is similarly effective yet a relatively safer option to total thyroidectomy. Sub-total thyroidectomy is associated with significant recurrence of goiters, leaves a small number of incidentally detected thyroid cancers inadequately treated and provides little significant advantage of being safer procedure compared to total thyroidectomy.⁽¹⁰⁾ In this study our aim is to evaluate clinicopathological profile of multinodular goiter in relation with different age and sex of the patients visiting to tertiary care hospital.

Methods

The present study was conducted for a period of 2 years at our center SAH & RC, B G Nagar during the period of January 1999 to December 2000. The subjects who were diagnosed with multinodular goiter based on clinical, radiological studies and FNAC, who later underwent surgical excision, were included in the study. Institute ethical committee permission and patient informed consent obtained before starting the study. Patients with Solitary Thyroid Nodule and Simple Thyroid swelling were excluded from the study. For all patients a detailed history was taken, clinical examination of thyroid nodule was done. Investigations like thyroid function tests, ultrasound, FNAC were carried out in all cases. Indirect laryngoscopic examination to check the mobility of vocal cords was done before and after surgery.

Results

Majority of the patients were between 30-49 years of age (40%). Female: male ratio was about 6:1. Apart from the swelling of the thyroid gland, Majority of the patients presented clinically with palpitations (13.3%), duration of illness was patients were 4-12 months (40%). The Commonest surgery performed was Subtotal

Table 1: Age distribution in MNG.

Age (Yrs)	Total no. cases	Percentage
11-20	2	6.67
21-30	9	30
31-40	12	40
41-50	04	13.33
51-60	02	6.67
>60	01	3.33
Total	30	100%

Table 2: Sex distribution in MNG.

Sex	No of patients	Percentage
Male	04	13.33
Female	26	86.67
Total	30	100

Table 3: Symptomatology of MNG.

Symptoms	No of patients	Percentage
Swelling in the neck	30	100
Palpitations	04	13.33
Pain & discomfort	03	10
Sweating	02	6.67
Tremors	02	6.67
Change of voice	01	3.33
Dyspnea	02	6.67
Dysphasia	03	
Sleep disturbance	02	6.67
Increased appetite	01	3.33
Diarrhoea	01	3.33
Menstrual disturbance	02	6.67

Table 4: Duration of illness – MNG.

Duration (months)	No of patients	Percentage
<1	02	6.67
1-4	06	20
4-12	12	40
12-24	04	13.33
24-36	02	6.67
36-48	01	3.33
>48	02	6.67

Table 5: Distribution of secondary Thyrotoxicosis in MNG.

Type of goiter	No of Patients	Percentage
Non-toxic MNG	24	80
Toxic MNG	06	20

Table 6: Type of surgery opted in MNG.

Type of surgery	No of Patients	Percentage
Subtotal thyroidectomy	21	70
Hemithyroidectomy	08	26.67
Totalthyroidectomy	01	3.33

Discussion

Thyroid nodule is a common entity, with up to 8% of the adult population having palpable nodules. With the use of ultrasound, up to 10 times more nodules are likely to be detected. Thyroid enlargement, whether diffuse or nodular leads to a battery of investigations, mainly to rule out the possibility of a neoplastic or nonneoplastic lesions. Timely intervention in nodular lesions of thyroid can significantly reduce morbidity and mortality.⁽¹¹⁾This result is comparable to the results obtained by Mangesh Ram Padmawar et al⁽¹²⁾

Conclusion

In our study Multinodular goiter was commonly observed in females. Multinodular goiter is commonly observed in 2nd and 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.

Conflict of interest: None

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