

Original article:

Clinical study of Multi-nodular goiter in TN medical college, Mumbai

¹Dr Rajesh Patil , ²Dr Shalika Aeron Jayaswal , ³Dr Snehal Kawale , ⁴Dr Shazia S Malik

^{1,4}Assistant Professor, ²Associate Professor, ³Jr III
Surgery Department, T N Medical College, Mumbai
Corresponding author: Dr Rajesh Patil

Abstract:

Introduction: Thyroid gland is an endocrine gland situated in the anterior side of the neck. Its main function is regulation of the basal metabolic rate, stimulates somatic and psychic growth and plays important role in calcium metabolism. Enlargement of the thyroid gland is the most common manifestation of the thyroid disease.

Material and methods: This study included 50 cases which of multinodular goitre in epidemiological parameters such as clinical presentation and management will be studied. Data collection from Medical records office department. The personal information of the patient was not captured and only the medical history, treatments details and laboratory reports including histopathology reports documented hence we requested Ethics committee for the waiver of consent in those selective retrospective cases. The history and clinical features were noted. The modality of management was registered.

Results: In our study 43% (6 cases) of the males presented in the age group of 51 years and above. Whereas among females 33.33% presented in the age group of 20 – 30 years and 25% in the 31 - 40 years. Majority of the females 58.33%, (21 cases) presented in the age group between 21 – 40 years

Conclusion: Multinodular goitre is more common in females and majority are in the age group of 21-40 years. The chief complaint in majority of the patients is swelling in front of the neck and few patients with pressure symptoms. In majority of the patients, duration of the swelling prior to presentation was 1 months to 5 years.

Keywords: multinodular goiter , thyroid gland

Introduction:

Thyroid gland is an endocrine gland situated in the anterior side of the neck. Its main function is regulation of the basal metabolic rate, stimulates somatic and psychic growth and plays important role in calcium metabolism. Enlargement of the thyroid gland is the most common manifestation of the thyroid disease. ¹The enlargement may be either generalized or localized, which again may be, toxic or nontoxic. The nontoxic goitre is further divided on etiological basis as endemic goitre and sporadic goitre. ²The endemic goitre is defined as one where more than 10% of population shows thyroid

enlargement.¹Multinodular goitre due to deficiency of iodine are prevalent in India. With this background present study was planned to study of clinical profile of multinodular goiter.

Material and methods:

This study included 50 cases which of multinodular goitre in epidemiological parameters such as clinical presentation and management will be studied. Data collection from Medical records office department. The personal information of the patient was not captured and only the medical history, treatments details and laboratory reports including histopathology reports documented hence we requested Ethics committee for the waiver of

consent in those selective retrospective cases. The history and clinical features were noted. The modality of management was registered. The diagnosis was made based on clinical presentation along with haematological, histopathological and radiological investigations.

Source of Data:

Retrospective data collected from hospital records from August 2012 to June 2015. Data of patients included in retrospective study, which includes routine blood investigations, histopathology and radiological imaging will be collected. The data of the 50 patients so collected

was tabulated and analyzed.

Inclusion Criteria:

- Patients with presenting with multinodular goitre.

Exclusion Criteria:

- Patients with clinically solitary thyroid nodule.
- Patients with proven thyroid malignancy preoperatively.
- Patients with age less than 18 years not included.

Observations and results:

Table 1 Age and Sex Incidence

Age in years	Male	Female	Total	Percentage
18-30	2	12	14	28%
31-40	4	9	13	26%
41-50	2	11	13	26%
51&above	6	4	10	20%
Total	14	36	50	100%

Table 2 Progression of Swelling

Progression of Swelling	Number of Cases
Gradual	44
Stationary	4
Rapid	2
Total	50

Table 3 Incidence of pressure symptoms

Pressure Symptoms	Total Number of cases	Percentage
Change in voice	0	0%
Difficulty in Swallowing	4	8%
Difficulty in breathing	2	4%
No pressure symptoms	44	88%
Total	50	100%

Table 4 Incidence of Toxicity

Toxicity	Female	Male	Total	Percentage
With Toxicity	8	4	12	24%
Without Toxicity	28	10	38	76%
Total	36	14	50	100%

Table 5 FNAC findings of Thyroid

Report of FNAC	Total Number of cases	Percentage
Colloid Goitre	42	84%
Hashimoto's Thyroiditis	5	10%
Follicular neoplasm	3	6%
Malignancy	0	0%
In conclusive	0	0%
Total	50	100%

Table 6 Histopathology (HPE) of Thyroidectomy Specimen

Histopathological Examination	Total Number of Cases	Percentage
Colloid Goitre	37	74%
Hashimoto's Thyroiditis	5	10%
Follicular Adenoma	1	2%
Follicular Carcinoma	2	4%
Papillary Carcinoma	5	10%
Medullary Carcinoma	0	0%
Total	50	100%

Discussion

This study included 50 cases which of multinodular goitre in epidemiological parameters such as clinical presentation and management will be studied. Data collection from Medical record office department. The personal information of the patient was not captured and only the medical history, treatments details and laboratory reports including histopathology reports documented.

In our study 43% (6 cases) of the males presented in the age group of 51 years and above. Whereas among females 33.33% presented in the age group of 20 – 30 years and 25% in the 31 - 40 years. Majority of the females 58.33%, (21 cases) presented in the age group between 21 – 40 years. But in the western literature quoted by "Bremer and Moll Night" in analysis of 1280 cases of Multinodulargoiter, the age incidence was maximum between 40 - 49 years. Hence the average age incidence in our study is low compared to western series. In our study maximum age of presentation was 70 years and minimum age

was 18 years with an average age incidence of 35 Years. The Chief complaint in our patients (100 %) was swelling in front of the neck. However, few patients had associated local symptoms like difficulty in swallowing and/or breathing. Duration of swelling ranged from 20 days to 15 years and 82% (90 cases) were seen in the range of 1 month to 5 years. The size of the swelling increased gradually in 44 cases (88%), rapidly in 2 cases (4%) and was stationary in 4 cases (8%). Both the cases, which showed rapid increase in size, were not malignant, and did not give rise to any pressure symptoms.

Most of the swellings - 45 cases (90%) were not associated with pain and only 5 cases (10%) had pain. Pain in MNG may be due to large size, haemorrhage in nodules. Pain may be subjective in nature.

Pressure symptoms were seen in 12% (6 cases) as against 29% in Antonio rios et al (2005) study.³ In our study 4 cases (8 %) presented with difficulty in swallowing and 2 cases (4%) with difficulty in

breathing. Thus difficulty in swallowing was the commonest pressure symptom.

Toxic symptoms and signs were seen in 12 cases (24%), which included 8 female (22.22%) and 4 males (28.5%). Among these 4 female patients had eye signs and 4 patients had tremors of hands and tongue, and tachycardia. Toxic symptoms were seen in 49% of cases in Antonio Rios et al (2005) study.³

There was no case of tracheal shift due to a goitre clinically it was confirmed by radiogram. FNAC of the thyroid was done in all the cases and the results compared with histopathological report of operated specimen. Histopathological examination proved to be papillary carcinoma in 5 cases, 1 case showed follicular adenoma and 2 cases of follicular carcinoma. Diagnosis of Follicular carcinoma preoperatively by FNAC was not possible as angio-

invasion and capsular invasion, which are features of Follicular carcinoma, were not evident. This shows that FNAC is not 100% accurate in the diagnosis of follicular carcinoma. We had 5 cases of MNG with thyroiditis and were operated for cosmetic reasons.^{4,5}

Isotope scan of thyroid was done in few selected cases. It is useful in localizing active thyroid tissue, toxic nodule or malignancy. It also rules out retrosternal extension of goitre and ectopic thyroid.

Conclusion:

Multinodular goitre is more common in females and majority are in the age group of 21-40 years. The chief complaint in majority of the patients is swelling in front of the neck and few patients with pressure symptoms. In majority of the patients, duration of the swelling prior to presentation was 1 month to 5 years.

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