IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 2 Ver. 11 February. (2018), PP 41-44
www.iosrjournals.org

A Clinical Study of Multi Nodular Goitre in a Tertiary Care Unit

Dr. K.B.S.Prabhakar[1], Dr. Kondur Venkateswarlu[2], Dr. K. Swetha[3]
[1] *First Author M.S. [General Surgery] AssociateProfessor in Dept. of General Surgery, Siddhartha Medical College/GGH, Vijayawada, A.P., India*
[2] *Corresponding Author M.S. [General Surgery] Assistant Professor in Dept. of General Surgery, Siddhartha Medical College/ GGH, Vijayawada, A.P., India*
[3] *Post Graduate, Dept. of General Surgery,Siddhartha Medical College / GGH, Vijayawada, A.P., India*
**Corresponding Author: Dr. K.B.S.Prabhakar*

Abstract: *The aim of study is to study the clinical presentations, surgical management and its outcome and complications associated with Multi nodular goitre patients.This randomized prospective study includes 50 patients with multi nodular goitre admitted in surgical units of SiddharthaMedicalcollege/ Govt. general hospital, VijayawadafromOctober 2015 toSeptember 2017.Results:In the study, it was noted that the multi nodular goiter more commonly affects the female and middle age population (20-60yrs). Patients most commonly present with complaint of swelling in neck.Patients present with toxic features and are usually treated surgically by subtotal thyroidectomy. Conclusion:FNAC is minimally invasive, highly accurate, cost effective, pre-operative assessment of patients with thyroid lesions. Main indication of surgery is cosmetic problem. Subtotal thyroidectomy is ideal treatment of MNG.*
Keywords:*Multi nodular goitre, Surgical management, Complications*

Date of Submission: 02-02-2018 Date of acceptance: 19-02-2018

I. Introduction

The thyroid gland is an endocrine gland situated in the lower part of front and the sides of the neck.The term thyroid is derived from Greek word, which means shield (Thyros – shield, eidos – form).Its main function is regulation of the basal metabolic rate, stimulates somatic and psychic growth and plays important role in calcium metabolism. Normal thyroid gland is impalpable. Enlargement of the thyroid gland is the most common manifestation of the thyroid disease. The 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 sporadicgoitre. The endemic goitre is defined as one where more than 10% of population shows thyroid enlargement.Diseases of thyroid gland especially multinodular goitre due to deficiency of iodine are prevalent in India. Though exact incidence of nodular goitre is not available, WHO in 1958 estimated that goitre was present in 200 million, which represented 7% of World's population at that time. Nodular goitres are more common in women than in men and the nodularity increases with increasing age. Multinodular goitres (MNG) can become malignant but it is rare.

II. Aim of Study

The aim of the study is a clinical study on the evaluation and management of multi nodular goitre.
.

III. Objectives

- To study the incidence and clinical presentation of multi nodular goitre.
- To study the management and outcome of multi nodular goitre.
- To study the complications and its management.

IV. Materials And Methods

4.1 SOURCE OF DATA:

This randomized prospective clinical study includes patients with enlargement of thyroid gland admitted in surgical units of Siddhartha Medical college/ Govt. general hospital Vijayawada from October 2015 to September 2017, who were taken for study considering the inclusion and exclusion criteria, after the clearance from the ethical committee was obtained.

4.2METHOD OF COLLECTION OF DATA:
The size of the sample is 50 patients. All the cases were admitted to the Hospital and evaluated by taking detailed history and by carrying out thorough clinical examination. The findings were recorded in a clinical proforma.

4.3 INCLUSION CRITERIA:
Patients with enlargement of thyroid gland, with more than one nodule palpable or enlarged thyroid gland with nodular surface.Both toxic and non- toxic multinodular goitres were included in the study.

4.2 EXCLUSION CRITERIA:
- Diffuse hyperplastic goiter
- Solitary nodule of thyroid
- Thyroid enlargement with the clinical features suggestive of malignancy
- Multinodular goitre patients not undergoing surgery were excluded

4.3 **METHOD OF COLLECTION OF DATA:**
Informed consent was obtained from each patient before any investigations / interventions.Thorough physical examination done by investigator himself.

Treatment protocol:
- Medical treatment:
- Thyroxine supression therapy
- Anti thyroid drugs
- Radio active iodine therapy
- Surgical treatment:
- Sub total thyroidectomy
- Near total thyroidectomy
- Total thyroidectomy

Complications:
- Haemorrhage
- Respiratory obstruction
- Recurrent laryngeal nerve paralysis
- External laryngeal nerve paralysis
- Parathyroid insufficiency
- Thyrotoxic crisis
- Wound infection
- Stitch granuloma
- Recurrent thyrotoxicosis
- Malignant exomphthalmos
- Tetany

V. Observations And Results

In the present study, the maximum age recorded was 75 years and minimum age recorded was 19 years with the mean age 36.36 years. Highest incidence was observed in the age group 31- 40 years (36 percent).

Table 1: Age Distribution among Patients in Present Study

AGE IN YEARS	NO. OF PATIENTS	PERCENTAGE
0- 10	0	0
11- 20	4	8
21- 30	13	26
31- 40	18	36
41- 50	10	20
51- 60	3	6
60 and above	2	4
Total	50	100

Table 2: Sex Distribution among Patients in Present Study

SEX	NUMBER OF CASES	PERCENTAGE
Female	47	94
Male	3	6
Total	50	100

Table 3: Distribution of Symptomatology among Patients in Present Study

SYMPTOMS	NUMBER OF CASES	PERCENTAGE
Swelling infront of neck	50	100
Pain and discomfort	10	20
Palpitation	5	10
Dysphagia	1	2
Dyspnoea	1	2
Increased sweating	4	8
Increased appetite	3	6
Weight loss	3	6

Table 4: Type of Goitre among Patients in Present Study

TYPE OF GOITRE	NUMBER OF CASES		TOTAL	PERCENTAGE
	Male	Female		
Nontoxicmultinodulargoitre	3	41	44	88
Toxic multinodulargoitre	0	6	6	12

VI. Discussion

The present study was conducted during September 2005 to August 2007 with the aim of assessing clinical presentation, age, sex distribution and symptomatology, indication and complications of surgery.

In the present study, the maximum age recorded was 75 years and a minimum of 19 years, out of 50 cases, 18 belong to age group 31- 40 (36%) years. Maximum distribution was observed in 3rdand 4thdecade and least was seen in 7th decade onwards. In the study conducted by Ahuja[14]majority of cases belong to the 3rd and 4thdecades, least was in the 7thdecade. Kapoor MM[15]reported that out of 226 cases, majority 145 (64%) cases were in the age group of 21- 40years with maximum distribution in the third decade and least in the 7th decade, 12 (5.3%) cases. The present study is comparable to the above studies.MNG is common in 3rd- 4thdecades, the reason being more TSH fluctuation is noted during adolescence and in reproductive age group.[16]

It was observed in the current study, out of 50 cases 47 (94%) were females and 3 (6%) were males with a sex ratio of female to male is 15.7:1.Study by Antonio Alfonso[17]showed a female to male ratio of 7:1. In the study conducted by Ahuja[14], out of 205 cases, 160 (78.1%) were females and 45 (21.9%) were males with a sex ratio of 3.5:1. In all above studies there is a female preponderance. The result of the recent study is comparable to the above studies.Almost all the thyroid related disorders are common in women and MNG is not an exception, the reason being more TSH fluctuation is seen in women during adolescence, pregnancy, child birth and so on.

All patients presented with swelling in front of the neck (100 percent). Other symptoms were Pain and discomfort in 10 cases (20 percent), palpitation in 5 cases (10 percent), dysphagia in 1 case (2 percent), dyspnoea in 1 case (2 percent), increased sweating in 4 cases (8 percent), increased appetite in 3 cases (6 percent) and Weight loss in 3 cases (6 percent).

The main indication for surgery in our series was the swelling itself either due to cosmetic reasons or fear of malignancy on the part of the patient. Subtotal thyroidectomies were done in 37 (74%) cases, hemithyroidectomy in 7 (14%) near total 5 (10%) and total thyroidectomy in 1 (2%) were carried out when there was high suspicion of malignancy.

We encountered no complications of surgery, apart from irritation of the throat in early postoperative periods which subsided without any active management. The average duration of stay in the hospital was 8 days.

According to histopathological analysis in the present study of 50 cases,37 (74%) cases showed features of benign goitre, 7 (14%) cases of Hashimoto's thyroiditis and 6 (12%) case of toxic multinodular goitre. Rao and Reddy[18]reported 7% distribution of Hashimoto's thyroiditis and Ahuja[14]reported 9%. The present study with 14% is comparable to above studies.

VII. Summary

1. Highest age incidence of multinodular goitre was observed in the age group 31 - 40 years (36 percent). Average age of the patient 36.36 years, youngest was 19 years and oldest was 75 years.
2. Females were predominant in number over males with a sex ratio 15.7:1

3. The commonest complaint was aswelling in front of the neck (in 100 percent of cases). Other symptoms were pain and discomfort, dysphagia, palpitation, dyspnoea, increased sweating, increased appetite and weight loss.
4. The standard surgery done was subtotal thyroidectomy in 74 percent cases. Hemithyroidectomy was done in 14 percent cases, near total thyroidectomy in 10 percent and total thyroidectomy in 2 percent of cases.
5. Postoperative periodwas uneventful in all cases except in 3 cases, in whom one patient had transient bilateral recurrent laryngeal nerve palsy, which recovered after one month and 2 patients developed wound infection.
6. On histopathological examination, 37 cases (74%) showed features of benign multinodular goitre, 7 cases (14%) Hashimoto's thyroiditis, and 6 cases (12%) of toxic goitre.

References

[1]. Standringsusan, Gray's Anatomy., 39thedition, London, Churchill Livingstone, 2005- pp 560- 561.
[2]. Ganong William F., The thyroid gland, ch 18, Review of Medical Physiology, 21st edition, Loi, do, Pretice - Hall International, Inc, 2003 pp320- 331.
[3]. Francis S, Green S. Endocrine disorders. Med clin N Am. 1991; 75: pp 195-206.
[4]. John B Hanks. Thyroid ch 34 Sabiston Textbook of Surgery, Vol- 1, 17th edition, Philadelphia: W.B. Saunders Company, 2004.pp 947- 984.
[5]. Jameson JL, Weetman AP. Disease of the Thyroid Gland ch 320 in Harrison's Principlesof Internal Medicine,vol 2, 16thed, Newyork: Mc Graw Hill, 2005. Pp 2106- 2117.
[6]. Francis A, Zacharewicz. Med clin N Am, 1968; 52: pp 432- 443.
[7]. Koss LG. Diagnostic cytology and its histopathologic basis,vol 2. 4th ed. New york; JB Lippincort, 1997; pp 1268- 1279.
[8]. Ahuja. Profile of nodular goiter. J AssocPhyInd 1968: 16: 699-707.
[9]. Kapur MM. Solitary thyroid nodule. Ind J Surg, 1982; 12: 166-168.
[10]. Das S. The thyroid and parathyroid in A concise textbook of surgery, 3rded, 2004,pp642-676.
[11]. Antonio, Alfonso, George SM, Chrisoudias M. Tracheal or oesophagealcompression due to benign thyroid disorders. Am J Surg 1981; 142:350-354.
[12]. Lakshmana Rao K. M. and Reddy S. S. "Hashimoto's disease – A Clinicopathological Study". Indian Journal of Surgery, December 1983: 693 – 695.
[13]. KusumKapila, SitaraAdbulSathar, Nawal Abdul Rahman Al – Rabah, ArunPrahash JC, and Man dalam S. Seshadri. "Chronic Lymphocytic (Hashimoto's) Thyroiditis in Kuwait Diagnosed by Fine Needle Aspirates". Ann. Saudi Med, 1995; 15 (4).

Dr. K.B.S.Prabhakar "A Clinical Study of Multi Nodular Goitre in a Tertiary Care Unit." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), Volume 17, Issue 2 (2018), PP 41-44.