

Original Article

Surgical management of thyroid diseases in Dhaka Medical College Hospital

Islam MN¹, Lodh D², Siddiqui MM³, Ahsan SA⁴, Debnath BC⁵, Khan AFM⁶

Abstract

Thyroid diseases have different treatment modalities. They can be treated with various surgical procedures. The aim of the study is to find out the outcome of various thyroid surgeries. A total of 161 patients of thyroid diseases were treated by surgery in the department of ENT at Dhaka Medical College Hospital in the period of January 2014 to December 2015. Out of 161 cases, 126 (78.3%) were female and 35 (21.7%) were male having a female to male ratio of 3.6: 1. Most of the patients (28.0%) were between the age group of 31 to 40 years (mean age 35 ± 6). Most of the patients presented with multinodular goiter (59, 36.6%) & nodular goiter (54, 33.5%). The patients underwent total thyroidectomy (77, 47.8%), hemithyroidectomy (53, 32.9%) and subtotal thyroidectomy (22, 13.7%). During the post operative period, transient recurrent laryngeal nerve palsy was found in 3 (1.9%) cases. We found in this study that, thyroid diseases are female predominant; mainly in the form of multinodular goitre which can be effectively treated by total thyroidectomy.

Key words: Thyroidectomy, multinodular goitre, recurrent laryngeal nerve palsy

Introduction

Thyroid diseases are common in Bangladesh.¹ These diseases are treated either medically or surgically or in combination of both. Even thyroid nodules are treated by surgery.² Though diffuse toxic goitre and toxic nodular goitre are treated initially by medicine but surgical operations may be

curative because all the overactive thyroid tissues are removed allowing the suppressed normal tissue to function again.³ There are different types of surgery for thyroid diseases e.g. lobectomy, isthmusectomy, hemithyroidectomy, total thyroidectomy, subtotal thyroidectomy, near total thyroidectomy and completion thyroidectomy.⁴ Lobectomy and hemithyroidectomy are the treatment of choice for nodular goitre. For multinodular goiter, treatment of choice is total thyroidectomy.⁴ Now a days, the opinion regarding surgical treatment of benign and malignant thyroid diseases are more liberal than those from before. It has been found to be more effective as well as a better way of managing those diseases. The objective of the present study was to assess the different surgical procedure performed in different types of thyroid diseases at the ENT & HNS department of Dhaka Medical College Hospital.

Methods

It was a cross sectional study. This study was conducted in the department of ENT & HNS of Dhaka Medical College Hospital in the period of January 2014 to December 2014. The study included consecutive 161 cases who fulfilled the selection criteria. Data were collected from the patients and recorded in a structured questionnaire. Histopathology and cytopathology were done in the department of pathology of Dhaka Medical College. Estimation of thyroid hormone were done in the Institute of Nuclear Medicine and Allied Science (INMAS), Dhaka Medical College campus. Data were analyzed with the help of SPSS version 16.0.

Results

The study included 161 patients, of them 126 were female (78.3%) and 35 were male (21.7%). Female male ratio was 3.6:1. Most of the patients (28.0%) were between the age group of 31 to 40 years.(Table- 1)

Table-I: Age in year (n=161)

Age in years	Numbers	Percentage
0-10	1	0.6 %
11-20	11	6.8%
21-30	43	26.7%
31-40	45	28.0%
41-50	32	19.9%
Above 50	29	18.0%
Total	161	100%

1. *Dr Md Nazmul Islam, Associate Professor, Department of Otolaryngology and HNS, Dhaka Medical College Hospital, Dhaka. Email: nimunna@yahoo.com
2. Dr Dipankar Lodh, Assistant Professor, Department of Otolaryngology and HNS, Dhaka Medical College Hospital, Dhaka
3. Dr Mohammad Mamun Siddiqui, Indoor Medical Officer Department of Otolaryngology and HNS, Dhaka Medical College Hospital, Dhaka
4. Dr Syed Ali Ahsan, Assistant Registrar, Department of Otolaryngology and HNS, Dhaka Medical College Hospital, Dhaka
5. Dr Bidyut Chandra Debnath, Medical Officer, Department of Surgery, Bangabandhu Sheikh Mujib Medcl University (BSMMU), Shahbag, Dhaka
6. Professor Dr A F Mohiuddin Khan, Professor and Head, Department of Otolaryngology and HNS, Dhaka Medical College Hospital, Dhaka, Bangladesh

*For correspondence

According to the histological findings of operated thyroid glands, most were multinodular (36.6%) and nodular goiter(33.5%).(Table- II)

Table- II: Histological classification of excised thyroid glands

Type of thyroid disease	Number	Percentage
Thyroid cyst	2	1.2%
Nodular goiter	54	33.5%
Multinodular Goitre	59	36.6%
Follicular adenoma	6	3.7%
Follicular carcinoma	6	3.7%
Papillary carcinoma	27	16.8%
Medullary carcinoma	3	1.9%
Metastatic carcinoma	1	0.6%
Lymphocytic thyroiditis	2	1.2%
Hashimoto thyroiditis	1	0.6%
Total	161	100%

All patients were treated surgically. Total thyroidectomy was done in 77 patients (47.8%). Hemithyroidectomy and subtotal thyroidectomy were done in 53(32.9%) and 22 (13.7%) patients respectively. (Table- II)

Table III: Surgical procedure

Name of operation	Number	Percentage
Hemithyroidectomy	53	32.9%
Total thyroidectomy	77	47.8%
Subtotal thyroidectomy	22	13.7%
Completion thyroidectomy	9	5.6%
Total	161	100%

The Recurrent laryngeal nerve injury occurred during thyroidectomy operation. Transient nerve injury occurred in 3 (1.9%) patients.

Tracheostomy was done as an emergency procedure postoperatively in a total of 2 (1.2%) patients. Drains were used in all patients. The operative mortality rate was zero.

Discussion

Thyroid diseases are more common in Bangladeshi females.⁵ In two different studies by Harles VM & Russel RCG; and Burgi H, it was found that thyroid surgery can reduce the transformation of benign thyroid swelling into malignant

one.^{6,7} In the present study, 36.6% (n=59) patients were found to have benign multinodular goiter. Total thyroidectomy was done in 47.8% (n=77) patients which is consistent with the findings of Akhter MB et al.⁸ Hemithyroidectomy was done in only 32.9% (n=53) patients in the present study which is similar to the findings of Oertli D, Harder F and Friendrich J Krause U, Schmidt U et al.^{9,10}

In the present study, the nodular goiter was effectively treated by hemithyroidectomy. In this series, thyroid malignancy and some multinodular goiter were treated by total thyroidectomy operation (n=77). It is observed that total thyroidectomy is the main stay of surgery for multinodular goiter. This is consistent with the finding of Steinert M, Friedrich T, Kietel R et al who also observed that total thyroidectomy is done for multinodular goiter throughout the world.¹¹ Recurrent laryngeal nerve palsy was found in 1.9% (n=3) of patients in post operative period in this study. This is consistent with the finding of Songun I et al.¹²

References

1. Ferdous A H, Sufia Y, Mahbulul H. Radioiodine therapy in the management of hypothyroidism- A study with 1445 cases. Bangladesh J of Otolaryngology. 1999;5:7-10.
2. Hossain MM, Haque MR. Surgical management of Thyroid diseases- A study on 78 cases. Mymensingh Med J. 2002;11(1):6-8.
3. Kobberling j, Hintze G. Differential indications for thyroid gland operation. Chirung. 1999;70:971-9.
4. Ramsden J, Watkinson JC. Thyroid cancer. In : Scott-Brown's Otorhinolaryngology, Head and Neck Surgery. 7th ed. London : Hodder Arnold; 2008. pp.2689.
5. Azim MA, Salam KS. Metastasis in Differentiated thyroid carcinoma. Mymensingh Med J. 2010 ; 19 (4) :497-503.
6. Harles VM, Russel RCG. Thyroid gland and the thyroglossal tract. In: Bailey and Loves short practice of surgery. 22nd ed. London: Chapman and Hall;1996. pp.506-29.
7. Burgi H. Therapy of euthyroid goiter. Schweiz Medical wochenschr. 1998; 118: 1881-5.
8. Akhter MB, Siddiqui MM et al. Surgical management of thyroid lesion Dinajpur medical College Hospital. Dinajpur Med Col J. 2014 Jul;7(2)

9. Oertli D, Harder F. Surgical approach to thyroid nodules and cancer. *Baillieres Best Pract Res Clin Endocrinol Metab.* 2000;14:651-66.
10. Friedrich J, Krause U, Schmidt U. Is hemithyroidectomy as standard intervention of suspicious puncture cytology justified? *Langenbecks Arch Chir Suppl Kongressbd.* 1996;113:189-91.
11. Steinert M, Friedrich T, Kietel R. Indications and surgical therapy of thyroid gland diseases- analysis of 725 operated patients. *Zentralbl Chir.* 1998; 123: 30-33.
12. Songun I, Kievit J, Wobbes T. Extent of thyroidectomy in nodular thyroid disease. *Eur J Surg.* 1999; 165: 839-42.