



## A STUDY ON TYPES OF THYROID SURGERIES IN A SURGICAL UNIT OF A TERTIARY CARE CENTER.

### General Surgery

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### ABSTRACT

**Background-** Thyroid operations are commonly performed surgical procedures in a General surgical unit. The Present study is carried out to know the different types of thyroid surgeries performed in our General surgical unit.

**Material and methods-** This study is carried out in Department of General Surgery & Department of Pathology, Osmania Medical College, Hyderabad, Telangana, India, from 2015 to 2017 i.e., for a period of 2 years from the records available in Operation theater and Pathology Lab.

**Results-** A total of 167 Thyroid Procedures were performed in the Department of General Surgery in a period of 2 years. Out of this 167 procedures, 120 procedures are performed on Nonneoplastic conditions of thyroid and 47 on Neoplastic diseases.

**Conclusion-** Lobectomies are the commonest surgical procedures performed on thyroid in our study followed by Total Thyroidectomy. Both Benign and Malignant Lesions of Thyroid are common on Right side. Left side lesions are less common than bilateral lesions.

### KEYWORDS

Thyroidectomy; Lobectomy; Thyroid; Cyst Excision.

### 1. INTRODUCTION

Thyroid operations are commonly performed surgical procedures in a General surgical unit. There are different types of thyroid surgeries like Partial Thyroidectomy, Hemithyroidectomy, Total Thyroidectomy, SubTotal Thyroidectomy, Near Total Thyroidectomy, Lobectomy, Dunhill Procedure, Excision of thyroglossal cyst (Sistrunk's operation). But currently, Thyroid surgeries nomenclature are based on three elements namely Total Lobectomy, Isthmusectomy & Subtotal lobectomy(1). The Present study is carried out to know the different types of thyroid surgeries performed in our General surgical unit.

### 2. MATERIALS AND METHODS.

This study is carried out in Department of General Surgery, Osmania Medical College, Hyderabad, Telangana, India, from 2015 to 2017 i.e., for a period of 2 years retrospectively. The different types of surgical procedures on thyroid are noted from the Operation theater records and also from the histopathological records of the Department of Pathology. The data thus obtained is analysed.

All the types of thyroid procedures thus noted are of old nomenclature. Those procedures are named according to the new classification.

#### 2.1) Classification & Definitions(1)

##### Thyroid operations

All thyroid operations can be assembled from three basic elements:

- 1 Total lobectomy – Removal of one Thyroid Lobe.
- 2 Isthmusectomy – Removal of Isthmus.
- 3 Subtotal lobectomy – Leaving behind some part of thyroid lobe.

Total thyroidectomy = 2 × total lobectomy + isthmusectomy  
 Subtotal thyroidectomy = 2 subtotal lobectomy + isthmusectomy  
 Near-total thyroidectomy = total lobectomy + isthmusectomy + subtotal lobectomy (Dunhill procedure)  
 Lobectomy = total lobectomy + isthmusectomy

In addition to these above procedures few other procedures include Completion Thyroidectomy = the surgical removal of the remnant thyroid tissue following procedures less than total or near-total thyroidectomy.(2)

##### Excision of Thyroglossal cyst

Simple Excision= Excision of Cyst only.

Complete Excision(sistrunk's operation) = excision of the whole thyroglossal tract, which involves removal of the body of the hyoid bone and the suprahyoid tract through the tongue base to the vallecula at the site of the primitive foramen caecum, together with a core of tissue on either side.(1)

### 3. RESULTS

A total of 167 Thyroid Procedures were performed in the Department of General Surgery in a period of 2 years. In our study, patients underwent different thyroid surgeries which include Completion thyroidectomies, Total & Subtotal thyroidectomies, Right and Left Lobectomies, Right and Left Total Lobectomies & Cyst excisions.(Table-1). Out of this 167 procedures, 120 procedures are performed on Nonneoplastic conditions of thyroid and 47 on Neoplastic diseases.

**TABLE 1- showing the types of Thyroid surgical procedures in our study**

S.No	TYPE OF SURGERY	No. OF CASES
1	COMPLETION THYROIDECTOMY	4(2.4%)
2	TOTAL THYROIDECTOMY	39(23.35%)
3	SUBTOTAL THYROIDECTOMY	18(10.77%)
4	RT LOBECTOMY	49(29.34%)
5	LT LOBECTOMY	29(17.36%)
6	RT TOTAL LOBECTOMY	13(7.78%)
7	LT TOTAL LOBECTOMY	8(4.8%)
8	THYROGLOSSAL CYST EXCISION	7(4.2%)
	TOTAL	167(100%)

#### 3.1) Procedures on NonNeoplastic Lesions of thyroid

Out of 120 Surgeries, Lobectomy is the commonest (49.17%, n=59) procedure for Nonneoplastic lesions of which 30.83% (n=37) are performed on right side and 18.34% (n=22) on left. 22 cases(18.34%) are Total Thyroidectomies, 16 cases (13.3%) are Subtotal thyroidectomies, 16 cases(13.3%) are Total Lobectomies of which 10 (8.3%) are performed on right side and 6 (5%) on left. 7 cases (5.83%) are excision of Thyroglossal cysts. Out of 75(62.5%) procedures done on unilateral side (Lobectomies and Total Lobectomies) 47 procedures (49.1%) are done on right side (rt lobectomies and Total lobectomies) and 28 procedures (23.3%) are done on the left lobe (lt Lobectomies and Total Lobectomies). Which means 62.6% procedures are done on right lobes and remaining 37.4% on left lobes.(Table-2)

**TABLE-2** showing different type of surgeries in non-neoplastic lesions in our study

DIAGNOSIS	TOTAL	SUBTOTAL	RT LOB	LT LOB	RT TOT LOB	LT TOT LOB	CYST EXCISION	TOTAL
NODULAR HYPERPLASIA	13	13	25	15	8	4	-	78
ADENOMATOID HYPERPLASIA	3	1	7	4	2	1	-	18
COLLOID CYST	-	-	2	1	-	1	-	4
HASHIMOTOS THYROIDITIS	6	2	3	2	-	-	-	13
THYROGLOSCYST	-	-	-	-	-	-	7	7
TOTAL	22(18.34)	16(13.33)	37(30.83)	22(18.34)	10(8.33)	6(5)	7(5.83)	120(100)

**3.2) Procedures on Neoplasms of Thyroid**

Out of 47 cases, Lobectomy is the commonest (40.43%, n=19) procedure done for neoplastic lesions of which 25.53% (n=12) are done on right side and 14.9% (n=7) on left. 17cases (36.17%) are Total thyroidectomies, 4 (8.51%) are Completion Thyroidectomies, 2 cases (4.25%) are Subtotal Thyroidectomies, 5 cases(10.6%) are Total

Lobectomies of which 3 (6.4%) are Right Total lobectomies and 2 (4.2%) are left Total lobectomies. Out of 24 procedure(51.03%) done on unilateral lobes (lobectomies and Total lobectomies) 15 procedures(31.93%) are done on right side and 9 (19.1%) procedures on left. Which means 62.5% of unilateral procedures are done on right lobes and 37.5% on left lobes.(Table-3)

**TABLE-3 Showing Different Type Of Surgeries In Neoplastic Lesions In Our Study**

DIAGNOSIS	COMPLETION Thyroidectomy	TOTAL Thyroidectomy	SUBTOTAL Thyroidectomy	Rt Lobectomy	Lt Lobectomy	Rt Total lobectomy	LT Total lobectomy	TOTAL
BENIGN	-	3(13.63)	-	8(36.37%)	6(27.27%)	3(13.63%)	2(9.1%)	22(100%)
FA	-	3	-	5	5	3	2	18
HCA	-	-	-	3	-	-	-	3
HTA	-	-	-	-	1	-	-	1
MALIGNANT	4(16%)	14(56%)	2(8%)	4(16%)	1(4%)	-	-	25(100%)
PTC	4	11	2	4	1	-	-	22
MTC	-	1	-	-	-	-	-	1
AC	-	2	-	-	-	-	-	1
TOTAL	4(8.51%)	17(36.17%)	2(4.25%)	12(25.53%)	7(14.9%)	3(6.4%)	2(4.2%)	47(100%)

**4. DISCUSSION**

Lobectomy is the commonest procedure(46.7%) done for overall thyroid diseases followed by Total Thyroidectomy (23.35%). Among Lobectomies, Right Lobectomy is the commonest procedure for overall thyroid diseases (29.34%) and for Nonneoplastic diseases (30.83%) in our study followed equally by Left Lobectomy & Total Thyroidectomy (18.34%) each.

For Neoplastic lesions also the commonest procedure is Lobectomy (40.43%) followed by Total Thyroidectomy (36.17%) in our study. Completion Thyroidectomy is 8.51% of all procedures performed on Neoplastic diseases of thyroid.

There are relatively few studies on the surgical procedures on thyroid. A study done by Ashwini et al., (3) also show that Lobectomy is the commonest procedure performed on thyroid. Study done by Abdul ghani et al.,(4) from Pakistan show that 70% of the thyroid surgeries are subtotal thyroidectomies, where as in our study only 10.77% are subtotal thyroidectomies. Total Thyroidectomy and Lobectomy comprise only 8.7% & 2.6% respectively in Abdul ghani et al., (4) study, where as in our study they comprise 23.35% & 46.7% respectively.

In Karthikeyan et al., (5) study, Total Thyroidectomy is the commonest procedure done Followed by Subtotal thyroidectomy and Lobectomy.

In our study, surgeries performed on right lobe of thyroid(37.12%) are common (Rt Lobectomy & Total Lobectomy) Followed by Bilateral surgeries (36.52%) (Total, Subtotal & Completion Thyroidectomies) followed by surgeries on Left lobe (22.16%) (Lt Lobectomy & Total Lobectomy). In a study done by Gupta et al., (6) right side surgeries are more common (49% Vs 35%) than left side, followed by surgeries on bilateral side (16%).

**5. CONCLUSION**

Lobectomies are the commonest surgical procedures performed on thyroid in our study followed by Total Thyroidectomy. Both Benign and Malignant Lesions of Thyroid are common on Right side. Left side lesions are less common than bilateral lesions.

**6. LIMITATION**

This study is limited to the fact that it is a retrospective study based on the records available in the Operation Theater and Pathology Histopathological lab. The data in the records are often entered by Junior most faculty in the Department of Surgery and Pathology which can be some times unreliable. But still the conclusions drawn from this study are near to the facts observed in different studies.

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