

COMPLICATIONS OF THYROIDECTOMY FOR BENIGN DISEASE

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Background: Goitre is a common ailment seen in mountainous regions, like the periphery of Abbottabad. Thyroidectomies are very common in our center. **Methods:** This study was done to find out the complication rate of thyroidectomies. **Results:** 189 cases were operated in Ayub Hospital Complex, Abbottabad during July 96 and Dec. 99. All patients were with benign disease and any case found to have malignancy were excluded from the study. The overall complication rate for all the categories was 15%. In total 5 patients died within one month of surgery.

INTRODUCTION

Goitre is a common ailment seen in mountainous regions³. Abbottabad is surrounded on all sides by mountains and its associated districts all lie at the foot of famous mountain ranges i.e. The Himalayas and the Karakorum's. Abbottabad therefore receives a good number of patients with diseases of thyroid gland.

Patients presenting early can be treated easily either with medicines or surgery, but long standing cases develop complications in the form of multinodularity, toxicity and malignancy in addition to pressure symptoms which arise due to its size. Multinodular goitre is irreversible⁴ and therefore surgery is the appropriate answer though radioiodine is also an option.

The aim of the study was to find out the complication rate of thyroidectomy in our setup and to devise measures to reduce it.

MATERIALS AND METHODS

The study was conducted in Surgical 'A' unit, Ayub Hospital Complex, Abbottabad, from July 1996 to Dec. 1999. In total 189 cases were included in the study.

All the patients with goiters were admitted and a thorough history was taken. Appropriate investigations were carried out as regards the disease and the fitness for anesthesia. All patients with toxic goitres were first made euthyroid with medicines either on outpatient basis or indoor basis when they failed to get controlled by themselves. Once euthyroid they were operated.

Patients shifted to operation theatre had their vocal cords examined at intubation and then again at extubation. All the perioperative events were recorded and thus data collected. The collected data was then analyzed and results formatted. In the light of the results conclusions were drawn and various recommendations made.

RESULTS

A total of 189 cases were included in this study. Following are the results as compiled for different categories of complications.

Haemorrhage:

Primary haemorrhage of more than 500 ml was seen in 8 patients (4%). Reactionary haemorrhage occurred in 2 patients (1%) and secondary haemorrhage did not occur in any patient as expected.

Hoarseness:

Out of 189 patients only 16 patients (8%) developed hoarseness of any magnitude. 14 patients (7%) recovered completely in the following 6 months while only 2 patients (1%) had no improvement showing permanent damage to recurrent laryngeal nerve.

Respiratory Problem:

In total 10 patients (6%) suffered some degree of respiratory embarrassment, ranging from mild dyspnoea to complete obstruction, 7 patients (3%) had a mild form and recovered with supportive treatment. On the other hand, 3 patients (2%) had a severe problem and required tracheostomy and among these one patient expired.

Thyroid Storm:

Only 2 patients developed signs and symptoms of thyroid storm with tachycardia, and hyperthermia. Both these patients made an excellent recovery with the help of a physician.

Tetany:

This particular complication occurred in quite a few patients i.e. 36 patients (22%). Of these 36 patients, 32 patients improved with Calcium Gluconate and vitamin D analogues and were totally Symptom free on follow up at 2 weeks. 4 patients however developed a persistent problem which was present even after 6 months of surgery and were thus labeled as having a permanent parathyroid damage and deficiency and were put on lifelong replacement therapy.

Wound Infection:

5 patients (3%) developed wound infection. The wound was thus opened and subsequently healed. Of the 18 patients, 6 patients (4%) expired within one month of surgery.

These patients had big goitres and a di to thyroidectomy.

The following Table summarizes the results.

SEX	HAEMORRHAGE			HOARSENESS		RESP.PROB		TETANY		STORM	INSECT	DEATH
	Pri	Reac	Sec	Temp	Perm	Mild	Sever	Temp	Perm			
MALE	2(1%)	-	-	2(1%)	-	-	-	-	-	-	1(<1%)	-
FEMALE	6(3%)	2(1%)	-	12(6%)	2(1%)	7(3%)	3(2%)	30 (17%)	2(1%)	2(1%)	4(2%)	6(3%)
TOTAL	8(4%)	2(1%)	-	14(7%)	2(1%)	7(3%)	3(2%)	32(21%)	2(1%)	2(1%)	5(3%)	6(3%)

DISCUSSION

Thyroidectomy is a technically difficult operation^{2,9} and is therefore associated with quite a few complications. The rate of complication is more when the procedure is performed by an inexperienced Surgeon than when done by an expert¹¹. Large and long standing goitre that have had thyroiditis previously are high-risk cases.

In our study we did not search for the recurrent laryngeal nerve specifically and ligated the inferior thyroid artery away from the gland as a safe guard for the recurrent laryngeal nerve. There is insufficient evidence to support that the identification of RLNs during surgery would be a significant factor in reducing the likelihood of RLN paralysis. We got the rate of damage to the nerve of any degree as 8% of which only 1% had a permanent palsy in the form of hoarseness. It is said that the chances of nerve damage increase when the nerve is exposed with a rate of 11.7%^{8,9}. One study quotes figures as 4.2% after nerve exposure as compared to 1.1% when the nerve was not exposed in subtotal thyroidectomy^{1,4,5,10}. Tetany (Parathyroid deficiency) has a close association with thyroidectomy and figures of 7.5% and 7% are quoted¹⁶. We got an overall rate of 18% and this high rate is probably because of the fact that we ligated the main trunk of the inferior thyroid artery thus compromising the blood supply of the parathyroid. However only 1% patients had a permanent form of tetany and needed vitamin D supplements even after 6 months of surgery.

Thyroid storm was seen in 1% cases and all recovered with supportive treatment.

Wound infection occurred in 3% patients which no doubt is high⁵ for such clean surgery and we attribute this to the heavy work load and deficiency of equipment in addition to short man power. Our death rate of 3% is also high⁷ and is because we lack a surgical ICU and therefore the post-operative care of such patients is not as desired.

CONCLUSIONS AND RECOMMENDATIONS

- The foremost thing is to create awareness among the masses to seek medical help early

in the disease and motivate them to use iodized salt

- Reduce workload according to the facilities available and to use the available resources efficiently.
- Proper training of the theatre staff in sterilization techniques and to keep them abreast with modern changes and advancement in this respect.
- Surgical intensive care unit is the need of the hour. All patients operated for goitre and other high risk patients should be cared for in the surgical ICU.
- Further studies are required for individual % complications to reduce their rates and improve the care of a surgical patient.

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