

Lateral approach to Thyroid: A Good Technique for Reoperative Thyroid Surgery

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ABSTRACT

Introduction: Thyroidectomy is the commonest endocrine surgical procedure undertaken throughout the world. Redo thyroidectomies are challenging procedures with a higher morbidity rate. Lateral approach to thyroid (LATT) is a good alternative to the standard midline exploration. The key to the technique is the development of the natural tissue plane between the strap muscle and the ipsilateral sternocleidomastoid muscle to explore the thyroid bed. A study was carried out to assess the efficacy, safety, and complication of LATT.

Materials and methods: Data on patients undergoing LATT in professorial surgical unit, Ragama from 2008 to 2015, were collected prospectively and analyzed. All procedures were done by a single surgeon.

Results: A total of 36 LATTs were done. Data from 32 people were collected, as 4 patients lost follow-up; 29 (90.6%) were females and 3 (9.4%) were males. Their age ranges between 28 and 61 (median 43.37). Three (9.4%) LATTs for parathyroid explorations and out of it one (3.1%) for redo parathyroid explorations were done. Nine (28.1%) cases were redo thyroidectomies and 18 (56.2%) were done with mini incision with lateral approach. Hemithyroidectomies were performed on 28 (87.5%) patients. Bilateral explorations were done on three (9.4%) patients and four (12.5%) lateral approaches were done for completion thyroidectomies for follicular malignant lesions. Transient clinical hypocalcemia was noticed in four (12.5%) patients and one (3.1%) developed hoarseness of voice, which was temporary; and none of them had complications like hematoma and postsurgical stridor.

Conclusion: Lateral approach to thyroid is a safe alternative to the standard approach for reexplorative thyroid surgery.

Keywords: Lateral approach, Reoperative, Thyroid.

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INTRODUCTION

Thyroidectomy is the commonest endocrine surgical procedure undertaken throughout the world. The technique of thyroidectomy has evolved over the last 200 years. The initial contributions made by Bilioth, Kocher, and others made the procedure safe and acceptable. Many others have contributed over the next 100 years to make thyroidectomy a very safe operation with a complication rate of around 1 to 2%.¹⁻³

Re-exploration or redo thyroidectomies are difficult procedures with a higher morbidity rate.^{4,5} Several innovations have been done to make reoperative thyroid surgery safer. Lateral approach to thyroid (LATT) is one such technique.

The key to the technique is the development of the natural tissue plane between the strap muscle and the sternocleidomastoid muscle.

Lateral approach to thyroid is a good alternative to the standard midline exploration^{6,7} and it is the approach practice in university surgical unit at North Colombo Teaching Hospital, Ragama for reexploration of thyroids, hemithyroidectomies for small follicular lesions, and exploration of parathyroids. This method can be used for either unilateral or bilateral LATT with conventional transverse collar skin incision. A study was carried out to assess the efficacy, safety, and complication of LATT.

MATERIALS AND METHODS

Data on all patients undergoing LATT in professorial surgical unit, University of Kelaniya from 2008 to 2015, were collected prospectively and analyzed in this study. All procedures were done by a single surgeon.

SURGICAL TECHNIQUE

Patient preparation and positioning were the same as conventional thyroid surgical technique (supine position, air bag under shoulder blades, and head extended on head ring with head end elevation about 10° till neck veins collapse). Traditional collar incision or mini thyroidectomy collar incision can be performed. Subplatysmal upper and lower flaps are elevated. Investing layer of deep cervical fascia is split in between strap muscles and sternocleidomastoid muscle to explore onto thyroid bed. Once the plane is developed, the thyroid lobe is accessible

directly. Omohyoid muscle is across the field and needs to be divided or retracted. The mobilization of the thyroid is done in the conventional manner by dividing the middle thyroid vein, etc. The advantage of the lateral approach is that it enables the dissection to take place in a virgin area and identification of parathyroids, and the recurrent laryngeal nerves are easy as the plane of dissection is directly over them.

Ligation of the superior pole, inferior thyroid artery, and the inferior pole is done in the conventional manner.

RESULTS

All patients with LATTs were reviewed from 2008 to 2015. A total of 36 LATTs were done. Data from 32 people were collected, as 4 patients lost follow-up; 29 (90.6%) were females and 3 (9.4%) were males. Their age ranges between 28 and 61 (median 43.37). Three (9.4%) lateral approaches were for parathyroid explorations and out of it, one (3.1%) for redo parathyroid explorations. Nine (28.1%) cases were redo thyroidectomies and 18 (56.2%) were done with mini incision with lateral approach. Hemithyroidectomies were performed on 28 (87.5%) patients and 16 (50%) performed for follicular lesions. Bilateral explorations were done on three (9.4%) patients and four (12.5%) lateral approaches were done for completion thyroidectomies for follicular malignant lesions. Transient clinical hypocalcemia was noticed in four (12.5%) patients and one (3.1%) developed hoarseness of voice that was temporary. Though we did not use drains, none of them had complications like hematoma and postsurgical stridor. Twenty-six (81.2%) patients were discharged on postoperative day 1 and six (18.8%) were discharged on day 2.

DISCUSSION AND CONCLUSION

Lateral approach to thyroid is an alternative to both conventional thyroidectomy and for parathyroid explorations. It is equally safe for both first-time exploration as well as redo thyroid explorations and completion thyroidectomies. This is a feasible technique for diagnostic hemithyroidectomy for follicular lesions as well. This technique is widely used in endoscopic thyroidectomies,⁶ and this study showed that it is a safe method for open surgery as well.

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