ORIGINAL ARTICLE

Lateral Approach to the Thyroid: An Alternative for Reoperations

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ABSTRACT

Introduction: Thyroidectomy is the most frequently performed endocrine surgery worldwide. However, redoing thyroidectomies presents significant challenges due to their higher risk of complications. The lateral approach to the thyroid offers a viable alternative to the conventional midline exploration. This technique focuses on carefully identifying the natural tissue plane between the strap muscles and the ipsilateral sternocleidomastoid muscle to access the thyroid bed. A study was conducted to evaluate the effectiveness, safety, and potential complications associated with the lateral approach.

Materials and Methods: A prospective observational study was conducted in the breast and endocrine division of the Department of General Surgery in Sher-i-Kashmir Institute of Medical Sciences. Data was collected from January 2021 to February 2024. 30 patients were included in the study.

Results: A total of 30 patients were included in the study who underwent thyroid reoperation using a lateral approach. Data was collected from 28 patients, as two patients were lost to follow-up. 23 (82.1 %) were females and 5 (17.8%) were males. Age ranged between 21 and 55, with a median age of 33.42 years. All 28 patients were admitted for completion thyroidectomy and had a previous history of hemithyroidectomy. 20 (71.4%) patients had a diagnosis of papillary thyroid cancer, and 8 (28.6%) had a diagnosis of follicular thyroid carcinoma. Three (10.7%) patients developed Transient hypocalcemia, and permanent hypocalcemia was not observed in any patient. 2 (6.3 %) patients had hoarseness of voice postoperatively, which was transient, and voice improved within 3 months. Hematoma was not seen in any of the patients.

Conclusion: The lateral approach to the thyroid is a reliable and safe alternative to the conventional method for reexplorative thyroid surgery.

Keywords: Thyroid, Thyroidectomy, Strap muscles, Sternocleidomastoid, Lateral approach

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INTRODUCTION

Thyroid surgery is the most common endocrine surgery performed worldwide. The traditionally taught technique for conventional thyroidectomy is via midline splitting of the strap muscles[1]. The lateral approach utilises the same central neck incision but accesses the thyroid gland posterolaterally through the space between the anterior border of the sternocleidomastoid (SCM) and the strap muscles. It is also known as the sternomastoid or "backdoor" or lateral approach (LA) to the thyroid gland[2,3]. This technique is quite useful for thyroid reoperations, as re-exploration or redo thyroidectomies are difficult procedures with a higher morbidity rate[4]. This offers a safe approach to the thyroid by avoiding the previously operated site in the midline where adhesions and scarring are present. The benefit lies in the development of the plane between the strap muscles and the sternocleidomastoid muscle. The endoscopic approach to the thyroid also utilises the same approach.

The lateral approach is the standard approach used in our department for reexplorative thyroid surgery. A study was conducted to assess the efficacy, safety and complications of the lateral approach in thyroid reoperations.

MATERIAL AND METHODS

We conducted a prospective observational study in our department from January 2021 to February 2024. Data was collected from 30 patients who were included in the study, but 2 patients were lost to follow-up. All patients underwent a complete thyroidectomy in our department. Basic

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demographic data, diagnosis, type of surgery and post-operative complications were collected prospectively and analysed in this study. All procedures were done by two surgeons, both professors with more than 10 years' experience in thyroid surgery.

OPERATIVE TECHNIQUE

The patient was positioned in a supine position with extension of the neck achieved with a bag placed under the shoulder blades with mild elevation of the head end. A transverse cervical incision is made about 2 cm above the suprasternal notch. Subplatysmal flaps are raised superiorly and inferiorly. The investing layer of deep cervical fascia is split between the strap muscles and the sternocleidomastoid muscle. The sternocleidomastoid muscle is retracted laterally, and the strap muscles are retracted medially. The superior belly of the omohyoid that crosses the field is retracted cranially. The thyroid lobe is visible after retraction. The mobilisation of the thyroid lobe is done by dividing the middle thyroid vein. Superior thyroid and inferior thyroid vessels are ligated in a conventional manner, and the thyroid lobe is lifted off the trachea and delivered out. The gap between the strap muscles and sternocleidomastoid is left open and not closed to prevent any hematoma formation in the closed space. Skin is closed with a subcuticular suture.

RESULTS

All patients who underwent a complete thyroidectomy via the lateral approach were reviewed in the study period. A total of 30 patients were included. 2 were lost to follow-up, and complete data collection was possible in 28 patients. 23 (82.1 %) were females and 5 (17.8%) were males. Ages ranged between 21 and 55, with a median age of 33.42 years. All 28 patients were admitted for completion thyroidectomy and had a previous history of hemithyroidectomy. All 28 patients had a preoperative diagnosis of Bethesda Category IV lesion and postoperative histopathological diagnosis of malignancy after previous hemithyroidectomy. 20 (71.4%) patients had a diagnosis of papillary thyroid cancer, and 8 (28.6%) had a diagnosis of follicular thyroid carcinoma. 3 (10.7%) patients developed Transient hypocalcemia, and permanent hypocalcemia was not seen in any patient. 2 (6.3 %) patients had hoarseness of voice postoperatively, which was transient, and voice improved within 3 months. Hematoma was not seen in any of the patients.

DISCUSSION

The Lateral approach to thyroid surgery is an established method for re-exploration of the thyroid gland and exploration of parathyroid lesions. We found that this approach allows easy access to the posterolateral surface of the thyroid with easy identification of parathyroid glands and recurrent laryngeal nerves. The complications were comparable to the conventional approach.

Studies have shown that for patients who require a second operation due to tumour recurrence, the lateral approach is superior to the traditional anterior approach in terms of surgical time, blood loss, and complications, as it avoids the disadvantages of the latter approach caused by the disorder of normal anatomical structures and scar tissue proliferation[5]. This technique is widely used in endoscopic thyroidectomies[6], and this study showed that it is a safe method for open surgery as well.

Duminda DMC Dissanayake et al[7] found that the lateral approach to the thyroid is an alternative to both conventional thyroidectomy and parathyroid explorations. It is equally safe for both first-time exploration as well as redo thyroid explorations and completion thyroidectomies. Our study confirms that the lateral approach is a safe and feasible approach for reoperations of the thyroid.

R.M. Singaporewalla et al.8 performed a case control study comparing the midline approach with the lateral approach for thyroid surgery and found that the lateral approach method is as safe as the midline technique with comparable operative time and significantly lower pain scores. It avoids midline separation and suturing of strap muscles and reduces the need for strap muscle transection for the removal of large goitres.

CONCLUSION

The lateral approach is a safe and feasible alternative in thyroid reoperations and can be employed as an approach in first-time explorations as well.

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REFERENCES

1. Giddings AE. The history of thyroidectomy. J R Soc

Med. 1998; 91(Suppl 33):3e6.

2. Alaa M. Lateral approach to attack superior thyroid vascular pedicle eliminates the need for strap muscles cutting during thyroidectomy. Med. J. Cairo Univ. 2015;83:125e134.
3. Dissanayake DDMC, Fernando RF, Dissanayake IJ. Lateral approach to thyroid: a good techinique for reoperative thyroid surgery. World J Endocr Surg. 2016;8(2):141e142.
4. Sun RH, Li C, Fan JC, Wang W, Li CH, Xu YQ, Li XX. Com parison of recurrence and complication by different thyroid ectomy in the treatment of differentiated thyroid carcinoma as initial treatment: a meta-analysis. Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi 2013 Oct;48(10):834-839.
5. Xin Jin, Yan Zhao, Dajun Yu, Jun Qian. Application of lateral approach in reoperation of thyroid tumor [J]. Journal of Bengbu Medical College, 2017,42 (06): 720–721+724.
6. Napolitano C, Vix M, Mutter D, Marescaux J. Thyroid and parathyroid surgery: is the medial approach truly elective? Technique and advantage of the lateral approach. Minerva Chir 1997 Nov;52(11):1393-1395.
7. Dissanayake DDMC, Fernando RF, Dissanayake IJ. Lateral approach to Thyroid: A Good Technique for Reoperative Thyroid Surgery. World J Endoc Surg 2016;8(2):141-142.
8. R.M. Singaporewalla, B.C. Tan, A.D. Rao, The lateral “backdoor” approach to open thyroid surgery: A comparative study, Asian Journal of Surgery, Volume 41, Issue 4, 2018, Pages 384-388, ISSN 1015-9584,https://doi.org/10.1016/j.asjsur.2017.05.003.