International Journal of Otorhinolaryngology and Head and Neck Surgery
Navarro-Fernández C et al. Int J Otorhinolaryngol Head Neck Surg. 2024 Aug;10(4):439-440
http://www.ijorl.com

pISSN 2454-5929 | eISSN 2454-5937

DOI: https://dx.doi.org/10.18203/issn.2454-5929.ijohns20242048

Case Report

Recurrence due to dissemination of tumor cells after transoral endoscopic thyroidectomy vestibular approach

Carlos Navarro-Fernández[1], Zelik Luna-Peteuil[3], Agustin Guemes-Meza[4], Kuauhyama Luna-Ortiz[1,2]*

[1]Department of Head and Neck Surgery, Instituto Nacional de Cancerología (Mexico)
[2]Department of General Surgery (Head and Neck), Hospital General Dr. Manuel Gea González (Mexico)
[3]Universitatea de Medicinâ și Farmacie Grigorie T. Popa, Iași (Romania)
[4]Department of Surgery at the Hospital del ISSSTE Irapuato

Received: 15 April 2024
Accepted: 14 June 2024

***Correspondence:**
Dr. Kuauhyama Luna-Ortiz,
E-mail: kuauhyama@yahoo.com.mx

ABSTRACT

The present report aims to document a case of recurrence attributed to residual tumor in a patient with papillary thyroid cancer who underwent Transoral endoscopic thyroidectomy vestibular approach (TOETVA). A 48-year-old female presented with a mass in the central part of the neck. On ultrasound, the lesion was classified as TIRADS 4b. Fine-needle aspiration biopsy revealed papillary carcinoma (cT1b cN0 cM0, stage I). The patient underwent transoral thyroidectomy without complications. The pathology report showed conventional papillary thyroid carcinoma in both lobes, with the predominant lobe measuring 2×1×0.5 cm. Three years later, the patient presented with elevated thyroglobulin levels (1.92) despite adequate TSH suppression. Six months later, a repeat ultrasound showed continued persistence of the lesion at level VI, prompting resection under local anesthesia, which revealed invasive papillary thyroid carcinoma involving soft tissues. TOETVA remains a safe procedure for cancer cases. However, its oncological outcomes have not yet been fully demonstrated, particularly regarding the impact of possible recurrences stemming from residual tumor fragments or cells during the procedure.

Keywords: Cancer, Recurrence, Thyroid, Transoral endoscopic thyroidectomy vestibular approach

INTRODUCTION

Cases of thyroid cancer and thyroid nodules have increased significantly in the last decade. Roughly 5% of the female population has a thyroid nodule.[1,2] As a result, surgical procedures have witnessed notable progress, including the advancement of endoscopic surgery techniques.[3,4] One such technique, transoral endoscopic thyroidectomy vestibular approach (TOETVA), allows access to the thyroid gland without leaving visible scars as it is performed through natural openings.[5,6] It is worth nothing that TOETVA is only indicated for certain cancer patients. Initially, questions regarding the potential for postoperative recurrence, including the scarring from trocar insertion, remained unclear.

There are currently no long-term oncological follow-up reports on large group of patients and tumors of larger size.[7] The present report aims to document a case of recurrence attributed to residual tumor in a patient with papillary thyroid cancer who underwent TOETVA.

CASE REPORT

For nearly a decade, TOETVA has proven to be a viable option for minimally invasive management of thyroid cancer. It is indicated for both benign and malignant tumors, although most case series involve benign tumors.[6] This is due to safety considerations as residual tumors may be left behind during resection in two ways. Firstly, given the size of the tumor, the thyroid gland may

need to be fragmented within the neck cavity, leading to the inadvertent shedding of tumor fragments.[7] Secondly, a capsular rupture may occur during specimen extraction.

Ultrasound is highly useful in detecting nodal recurrence, while fine-needle aspiration biopsy is deemed an essential resource. Nodal recurrence in patients staged as N0 poses a challenge, as addressing it would require conventional open surgery at the site of recurrence, thus negating the aesthetic benefit provided by TOETVA.

Although TOETVA was introduced ten years ago and has been widely adopted,[4] there have been no reports of recurrence in the neck, let alone in the surgical area of the thyroidectomy. Nodal recurrence may be underreported, particularly in patients who did not undergo I-131 ablation therapy. This therapy can target microscopic disease, potentially preventing it from manifesting over time.

We have previously reported a series of TOETVA cases specifically involving cancer patients,[7] as our institute focuses solely on cancer. According to the 2015 American Thyroid Association guidelines, follow-up and surveillance depend on whether patients underwent total thyroidectomy via TOETVA and the initial risk stratification.[1] An ultrasound should be performed 6-12 months after surgery, followed by an assessment of the administration of radioactive iodine based on each patient's status. For low-risk patients who underwent TOETVA, maintaining their TSH levels within the range of 0.5 to 2 mU/l is advisable.[2] TSH suppression is unnecessary in patients who can maintain their target TSH level. Routine ablation therapy is not recommended in low-risk patients.

Currently, TOETVA is performed in differentiated thyroid cancers with tumors smaller than 2 cm.[3] It is advised for lesions requiring ipsilateral lobectomy and isthmectomy to mitigate postoperative complications.[5] However, total thyroidectomy has not yet become a standard but could be tailored to suit each patient's needs.[8]

In contrast to the previously mentioned, we do not recommend TOETVA for performing lobectomies or isthmectomies. This is because if a patient later requires an additional total thyroidectomy based on definitive histology, a reoperation would compromise the benefit of achieving a scar-free surgery. Another concern is the possibility of recurrence, as illustrated in this case where thyroglobulin monitoring facilitated the detection of such recurrence. Managing recurrence in partial thyroidectomies would be challenging due to the absence of postoperative thyroglobulin markers. Over time, we anticipate encountering similar reports, like the one presented here, detailing cases of recurrence due to residual tumors or recurrent nodal disease. At present, this seems to be the first reported case.

CONCLUSION

TOETVA remains a safe procedure for cancer cases. However, its oncological outcomes have not yet been fully demonstrated, particularly regarding the impact of possible recurrences stemming from residual tumor fragments or cells during the procedure.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Haugen BR, Alexander EK, Bible KC, Doherty GM, Mandel DJ, Nikiforov YE. American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer. The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. Thyroid. 2016;26:1-133.
2. Vaccarella S, Franceschi S, Bray F, Wild CP, Plummer M, Dal Maso L. Worldwide Thyroid Cancer Epidemic? The Increasing Impact of Overdiagnosis. N Engl J Med. 2016;375:614-7.
3. Huscher CS, Chiodini S, Napolitano C, Recher A. Endoscopic Right Thyroid Lobectomy. Surg Endosc. 1997;11:877.
4. Miccoli P, Berti P, Conte M, Bendinelli C, Marcocci C. Minimally Invasive Surgery for Thyroid Small Nodules: Preliminary Report. J Endocrinol Invest 1999;22:849-51.
5. Chang E, Kim HY, Koh YW, Chung WY. Overview of Robotic Thyroidectomy. Gland Surg. 2017;6:218-28.
6. Jongekkasit I, Jitpratoom P, Sasanakietkul T, Anuwong A. Transoral endoscopic thyroidectomy for thyroid cancer. Endocrinol Metab Clin N Am. 2019;48(1):165–80.
7. Luna-Ortiz K, Gómez-Pedraza A, Anuwong A. Lessons learned from the transoral endoscopic thyroidectomy with vestibular approach (TOETVA) for the treatment of thyroid carcinoma. Ann Surg Oncol. 2020;27:1356–60.
8. Anuwong A, Sasanakietkul T, Jitpratoom P, Ketwong K, Kim HY, Dionigi G, et al. Transoral Endoscopic Thyroidectomy Vestibular Approach (TOETVA): Indications, Techniques and Results. Surg Endosc. 2018;32:456-65.

Cite this article as: Navarro-Fernández C, Luna-Peteuil Z, Guemes-Meza A, Luna-Ortiz K. Recurrence due to dissemination of tumor cells after transoral endoscopic thyroidectomy vestibular approach. Int J Otorhinolaryngol Head Neck Surg 2024;10:439-40.