



Future directions of transoral endoscopic thyroidectomy vestibular approach

The surgical treatment of thyroid disease goes far beyond merely eliminating the cancer and or thyroid related symptoms. Surgeons, endocrinologists, oncologists, and patients now understand surgical treatments and cosmetics results must be integrated. In well-run comprehensive endocrine Centres using state-of-the-art technology, the majority of patients will be treated by conserving therapy when a screen detected little tumor has been visualized and with a minimally invasive surgery.

In recent large trials performed in last years minimally invasive procedures therapy was shown to be equally effective in the treatment of thyroid cancer and other thyroid disorders, as was an open conventional surgery. Increasingly, additional new technologies such as trans axilla, areola, retroauricular and now transoral via vestibular approach determined perfect cosmetic results.

Currently, more than 20 different endoscopic or robotic approaches in 20 years have been proposed, and applied. The survival of a patient is crucial, lower morbidity and safety issues are essential, however, the cosmetic outcome after the treatment is an aspect that cannot be ignored. Cosmetic outcome is not only a secondary consideration. There have been two significant developments that have improved the cosmetic outcome remarkably: (I) progress in new technology and accessories for thyroidectomy (as energy-based device) to shorten the surgical incision in the neck and (II) new surgical approaches and techniques that cause much less scarring in the neck (MIVAT) or even no scar in the neck (Axilla, breast, retroauricular), or any scar (TOETVA). The aims of this integration are the uncompromised safety in treatment, while establishing an aesthetically pleasing Patient shape. This is most readily achieved by a team approach including an expert surgeon, assistant, endocrinologist, anesthesiologist.

Today, high volume thyroid surgeons have to have, in their arsenal of procedures, a variety of thyroid techniques into which the gland excisions are integrated, and the cosmesis of a patient's is maintained. High volume endocrine surgeons should be familiar with all of the different techniques in order to provide an optimal cosmetic outcome. Best outcomes for any new endoscopic approach to the thyroid gland are surgeon and patients candidacy. The team of surgeons should all have a major interest in thyroid management in order to understand the complexities involved. A good measure of this is the number of thyroidectomy they manage annually. More than 100 cases of thyroidectomies is a good indication that the team has the required volume to constantly achieve good outcomes.

We are proud to present this special issue dedicated to the most recent development in TOETVA, which represents a comprehensive and extensive collection of information regarding all aspects of the patient's management including selection and preparation of the patient, informed consent, anesthesiological aspects, the progress in surgical techniques and technological tools used for the prevention of the most common complications (florescence and neuromonitoring IONM), and the prevention and treatment of any complications including those that are rarely described in literature.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned by the Editorial Office, *Annals of Thyroid* for the series "Transoral Thyroidectomy". The article did not undergo external peer review.

Conflicts of interest: All authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/aot.2018.02.01>). The series "Transoral Thyroidectomy" was commissioned by the editorial office without any funding or sponsorship. Anuwong Angoon, Hoon Yub Kim and Ralph P. Tufano served as the unpaid Guest Editor of the series. Gianlorenzo Dionigi served as the unpaid Guest Editor of the series and serves as an unpaid editorial board member of *Annals*

of Thyroid from Mar. 2017 to Feb. 2019. The authors have no other conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the manuscript and ensure that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.



Wen Tian



Anuwong Angkoon



Hoon Yub Kim



Ralph P. Tufano



Gianlorenzo Dionigi

Wen Tian

Department of General Surgery, Chinese People's Liberation Army General Hospital, China. (Email: tianwen301_cta01@163.com)

Anuwong Angkoon

Department of Surgery, Police General Hospital, Bangkok, Thailand. (Email: noii167@hotmail.com)

Hoon Yub Kim

Department of Surgery, Korea University College of Medicine, Seoul, Korea.

(Email: boonyubkim@gmail.com; boonyubkim@korea.ac.kr)

Ralph P. Tufano

Department of Otolaryngology-Head and Neck Surgery, Division of Head and Neck Endocrine Surgery, The Johns Hopkins

University School of Medicine and Johns Hopkins Medical Institution, Baltimore, MD, USA. (Email: rtufano@jbmi.edu)

Gianlorenzo Dionigi

Department of Human Pathology in Adulthood and Childhood "G. Barresi", Division of Endocrine and Minimally Invasive Surgery,

University Hospital "G. Martino", University of Messina, Messina, Italy. (Email: gdionigi@unime.it)

Received: 30 December 2017; Accepted: 1 February 2018; Published: 26 March 2018.

doi: 10.21037/aot.2018.02.01

View this article at: <http://dx.doi.org/10.21037/aot.2018.02.01>

doi: 10.21037/aot.2018.02.01

Cite this article as: Tian W, Angoon A, Kim HY, Tufano RP, Dionigi G. Future directions of transoral endoscopic thyroidectomy vestibular approach. *Ann Thyroid* 2018;3:6.