

Editorial

# Type IV Thyroplasty: The Voice of Trans Women (Gender Dysphoria)

Geraldo Pereira Jotz<sup>1</sup>  Ana Cristina Vargas<sup>2</sup>

<sup>1</sup> Full Professor at the Federal University of Rio Grande do Sul, Porto Alegre, Brazil

Otorhinolaryngologist and Head and Neck Surgeon.

<sup>2</sup> Clinical Speech Therapist, Musician, Brazil

Int Arch Otorhinolaryngol 2022;26(4):e517–e518.

A person's voice represents their personal identity. A part of a new social identity, it contains both communication and relationship features. Since the voice is an altruistic and absolutely individual and unique product, it can be considered one of the most important means of expression and identification for an individual.

Self-esteem is closely related to this vocal identification, and a combination of speech therapy and surgery (Isshiki Type IV Thyroplasty) offers the best option for those who have problems in this regard. People of all ages and from different cultures express themselves in different ways through their voices. However, the basic frequency of the voice that each of them uses clearly shows whether they are talking to a man, a woman, or a child. It is worth mentioning that the earlier this surgery is performed, the better it is, because the results differ when Isshiki Type IV Thyroplasty is performed at the age of 20 years, 40 years, or 60 years.

The larynx is a hormone-dependent organ, affected by hormones in general. Endocrine diseases, especially those of the thyroid and adrenal glands, can cause important changes in this organ.<sup>1</sup>

Type IV Thyroplasty by Isshiki et al. (1974)<sup>2</sup> is a technique developed to increase the fundamental frequency of the voice by bringing the thyroid cartilage closer to the cricoid cartilage. It was originally indicated for vocal pitch elevation of male-to-female transsexual patients and for elderly women who exhibited excessive vocal masculinization.

There is much discussion about isolated treatments to accentuate the voice of male transsexual patients through hormone therapy and/or speech therapy. In fact, neither of these treatment modalities in isolation can demonstrate better results of vocal pitch elevation than surgery (Type IV Thyroplasty) combined with post-surgical speech therapy. Over the last two decades, treating the voice of transsexual patients, we are convinced that performing Type IV Thyroplasty using the

Isshiki technique associated with post-surgical speech therapy leads to better results in terms of vocal pitch elevation and better quality of the voice, in patients who have not previously undergone any surgical intervention on the laryngeal structure. In patients who have already undergone laryngeal surgery, i.e., when the surgery is repeated, it is still possible to elevate the voice pitch to the level of a female voice. However, we emphasize that vocal pitch elevation sometimes does not provide the same elevation in patients who have not undergone a previous laryngeal surgery.

The voice is one of the most commonly used means of communication. When the voice matches the person speaking, the person listening pays attention to what is being said. If a person recognizes themselves in their voice, there is no problem. However, if a person struggles to accept the gender with which they identify and is uncomfortable with their vocal expression, the suffering is constant. In the last two decades, we have chosen to address the vocal quality of life for people who are uncomfortable with their vocal expression compared to their gender of identification.

The proposed surgery using the Type IV Thyroplasty technique of Isshiki is performed under local anesthesia, combined with sedation of the patient. During the surgical procedure, the thyroid cartilage is brought closer to the cricoid cartilage, and mini-silicone plates are transfixed to anchor the given points. We attempt to achieve at least one octave for each point by asking the patient to emit the sustained vowel /i/ during point fixation to ensure anatomical change. This is recorded with a device used by a speech therapist at the time of the procedure. However, surgical intervention to alter the laryngeal structure alone does not guarantee optimal results when it comes to improving the voice. Post-surgical voice therapy is essential.

Voice assessment begins with consultation with the otorhinolaryngologist and speech therapist for a general

**Address for correspondence**  
Geraldo Pereira Jotz, MD, PhD,  
Rua Sarmento Leite, 500, Prédio  
do ICBS, Porto Alegre, RS, 90050-  
170, Brazil (e-mail: iaorl@iaorl.  
org).

**DOI** [https://doi.org/  
10.1055/s-0042-1758231](https://doi.org/10.1055/s-0042-1758231).  
**ISSN** 1809-9777.

© 2022. Fundação Otorrinolaringologia. All rights reserved.  
This is an open access article published by Thieme under the terms of the  
Creative Commons Attribution-NonDerivative-NonCommercial-License,  
permitting copying and reproduction so long as the original work is given  
appropriate credit. Contents may not be used for commercial purposes, or  
adapted, remixed, transformed or built upon. ([https://creativecommons.org/  
licenses/by-nc-nd/4.0/](https://creativecommons.org/licenses/by-nc-nd/4.0/))

Thieme Revinter Publicações Ltda., Rua do Matoso 170, Rio de  
Janeiro, RJ, CEP 20270-135, Brazil

assessment of the patient and factors affecting the voice. The patient undergoes laryngeal videolaryngostroboscopy and computerized analysis of the voice before and after surgery, and the sounds emitted by the patient are fundamental to the patient understanding and participating in the vocal “gains” at all stages of the therapeutic process. In addition, the patient answers a validated voice self-assessment questionnaire before and after surgery.

The best results depend on the surgical technique used and the patient’s efforts and commitment to put into practice the changes to their voice under the guidance of a speech therapist in the post-surgical period. The preceding voice treatment before surgery serves as a preparation of the cricothyroid muscles for the new voice to be built up later in the post-surgical period in individuals with potentially low-pitched voices.

Considering these issues, it is important to include speech-language-hearing therapy in the trans-gendering process, from the perspective of such patients’ comprehensive health promotion, improving their quality of life, because this is an aspect of health care desired by most transgender people.<sup>3</sup>

Voice is part of the quality of life for transgender people who are often not satisfied with their vocal expression. We cannot ignore the emotional and hormonal aspects related to voice quality that need to be observed, evaluated, and

treated individually. The overall vision of a person’s voice must be institutionalized from the first contact with the patient. Parameters obtained by analyzing the patient using the Voice Handicap Index (VHI) are important before and after surgery to compare and monitor the evolution of vocal performance.

In conclusion, the voice contains an immeasurable amount of information about a person, revealing emotional, socio-educational, and personality aspects, among others, and is an important focal point in shaping the individual’s relationships in society.

#### Conflict of Interest

None declared.

#### References

- 1 Tsuji DH, Sennes LU, Bohana SC, Pinho SMR. Management for voice fundamental frequency in the congenital adrenal Hyperplasia through Isshiki’s Type IV Thyroplasty. *Int Arch Otorhinol* 2003;7(03):241–244
- 2 Isshiki N, Morita H, Okamura H, Hiramoto M. Thyroplasty as a new phonosurgical technique. *Acta Otolaryngol* 1974;78(5–6):451–457. Doi: 10.3109/00016487409126379
- 3 Barra BGA, Gusmão UMAS, Araujo ANB. Self-perception of voice in transgender people. *Rev CEFAC* 2020;22(04):e4819. Doi: 10.1590/1982-0216/20202244819