

reported by Isshiki et al. in 1974, and consists of reducing the posterior anteros diameter of the thyroid cartilage. Partial resection of this cartilage results in the relaxation of the vocal cords and decreased tension on them, making the voice more severe and decreasing its fundamental frequency.

Methods: For this analysis, the fundamental frequency of the voice and the score obtained in the Vocal Handicap Index-10 (IDV-10) pre- and post-surgical of the patients of the Hospital Instituto Paranaense de Otorhinolaryngology of Curitiba submitted to relaxation thyroid is performed by a medial approach between 2018 and June 2022, totaling 30 cases of cisgender male participants diagnosed with a mutational falsetto. The patients were operated by a single surgeon, using the same technique in all procedures, in order to enable a verisimilcomparison between the sample. The "paired sample *t*-test" was used for statistical analysis.

Results: The mean preoperative Fo in the sample ($n = 30$) was 179.76 Hz (standard deviation of 17.03, standard error of 3.11). When evaluated after six months of the procedure, the mean Fo decreased to 109.16 Hz (standard deviation = 6.49, standard error = 3.11, $p < 0.001$), proving the effectiveness of surgery in reducing voice Fo. The preoperative IDV-10 had a mean score of 22.87 (standard deviation = 6.95, standard error = 1.268). When evaluated six months after the procedure, the score decreases to 4.10 (standard deviation = 2.31, standard error = 0.422, $p < 0.001$), showing a great positive impact of surgery on the function of the participants' voice.

Discussion: Analyzing the results, it is confirmed the hypothesis that type-III thyroplasty presents the expected results, making the voice effectively more severe, due to the significant reduction of Fo. The procedure also shows to achieve the expectations of patients, improving their quality of life, especially in the social aspect, through a large decrease in the score in the IDV-10 questionnaire after surgery, an important parameter validated with adequate psychometric properties of validity, reliability and sensitivity to promote its use in the evaluation of individuals with dysphonia. With 30 patients, the present study, therefore, can be considered an unprecedented compile of the comparison not only of the alteration of fo by the type III thyroplasty process, but also of the subjective perception that such change causes in the quality of life of the participant (IDV-10), proving the validity of this surgical procedure.

Conclusion: Voice plays an extremely important role in social interaction and in the construction of personal identity, so the patient's dissatisfaction with his own voice has a great impact on his quality of life, directly affecting his/her health status. The results of the study prove the efficacy of type-III thyroplasty in reducing the fundamental frequency of voice. Therefore this procedure may be indicated for cisgender or transgender men dissatisfied with their tone of voice, even after speech therapy and/or hormone therapy with testosterone.

Keywords: Type-III thyroplasty; Vocal surgery; Fundamental frequency; Pubertal.

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Tomographic changes of the paranasais sinuses of patients with Covid-19

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Objective: To verify the presence of tomographic alterations in the paranasais sinus of patients diagnosed with Covid-19 and to evaluate the presence of an association between olfactory symptoms and the involvement of these sinus.

Methods: This is an observational cross-sectional study that analyzed computed tomography of the nose and paranasal sinus (SSCT) of patients with Covid-19 regarding the presence of mucous thickening in the paranasal sinus. Patients who underwent RT-PCR examination for detection of Covid-19 (SARS-CoV-2) and TCSPN infection from March 2020 to March 2021 were included. Patients with a history of previous nasosinus surgery, recent facial trauma, age below 18 years or with incomplete information in medical records were excluded.

Results: A total of 65 individuals were included, of whom 28 were diagnosed with Covid-19. In tomographic analysis, an association was observed between Covid-19 infection and mucous thickening of the bilateral maxillary sinus ($p = 0.038$) and mucous thickening of the bilateral ethmoidal sinus ($p = 0.005$). No significant association was found between mucous thickening of the sphenoid and frontal sinus with virus infection. The complaint of olfactory dysfunction was reported by 20% of the patients, with no association with tomographic alterations or Covid-19 infection.

Conclusion: Covid-19 virus infection possibly causes an injury to the mucosa of ethmoidal cells due to the inflammatory process resulting from viral infection. The lesion of the mucosa of the ethmoidal sinuses may cause alteration in the drainage physiology of the maxillary sinuses due to blockade of the middle meatal tract – site of drainage of the maxillary sinus – and lead to edema of the mucosa of this sinus. This change in the mucosa of the ethmoidal sinus may also be the cause of olfactory disorders presented by patients, as well as may cause lesions in the olfactory nerve.

Keywords: Covid-19; SARS-CoV-2; Anosmia; Tomography; Paranasal sinuses.

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