

**IS02****Gender affirmation surgery - ENT role**

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Transgender people experience incongruence between their biological sex and their gender identity. Gender dysphoria is a psychological distress that results from that incongruence. Gender-affirming treatments have proven effective in relieving gender dysphoria. One in four transgender people will undergo gender affirmation surgery which includes facial (rhinoplasty, chondrolaryngoplasty, voice surgery), chest, and genital surgery. Voice is an important aspect of gender affirmation. The primary goal of voice-related gender-affirming treatment options is to reduce gender dysphoria by creating congruency between a patient's voice and their gender identity. Transgender women experience issues with hormone replacement therapy (HRT) as estrogen does not impact vocal cords in the way testosterone does. When voice therapy fails, ENT procedures can make a difference.

Phonosurgery techniques for vocal feminization include cricothyroid approximation, vocal fold webbing, laser vocal fold reduction (LAVA), and thyroid elevation (FemLar).

We present a 28-year-old patient who underwent laser-assisted voice adjustment (LAVA) as part of her transition from man to woman (MTF) using CO2 lasers. Before LAVA, rhinoplasty and thyroplasty were performed to reduce the size of the larynx and the protrusion of Adam's apple. The goal of LAVA was the "feminization" of the patient's voice. Phonetic analysis of the voice was performed pre and postoperatively. Prior to the operation, the voice is (reading non-fricative text for 70 s (T1)) high for male voice  $F_0 = 156$  Hz. After the operation, the voice is slightly higher  $F_0 = 170$  Hz. In spontaneous speech, the voice is medium-high for a male voice before the surgery ( $F_0 = 105$  Hz), and after surgery,  $F_0$  is 164 Hz in spontaneous speech, which is also slightly lower than the average pitch of a female voice, but nonetheless, more similar to it. The patient is satisfied with her physical appearance and new voice.

**IS03****Treatment of Otosclerosis with LASER**

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Otosclerosis is a hereditary disease presenting with progressive hearing loss, tinnitus, and normal otoscopic findings. It is caused by the changes in bone metabolism of otic capsule and is considered as a multifactorial disease, caused by both genetic and environmental factors. Present studies have found so far nine genes as the candidates of the disease, and in some patients otosclerosis has an autosomal dominant mode of inheritance with incomplete penetrance. Investigations of environmental factors (e.g. measles virus infection) as well as hormonal and immune factors in some connective tissue diseases have suggested having a role in the etiopathogenesis of the otosclerosis. Despite the unclear etiology, formation of a hard bone on the annular ligament leads to the stapes fixation with the consecutive conductive hearing loss.

Controversial etiopathogenesis, however, doesn't influence the successful surgical treatment of otosclerosis. Most often used surgery procedure today, the stapedotomy, has a success rate of more than 90% in restoring the hearing loss, while the rate of tinnitus treatment is much lower, about 50%. The procedure is well known for several decades and is considered as a minimal invasive surgery. Critical part of the procedure with highest risk of possible postoperative deafness is drilling the hole in a stapes footplate for the insertion of a prosthesis. Standard and widely used drilling method with diamond burr can be replaced for more security with CO2 LASER.

This presentation gives contemporary data of etiopathogenesis, clinical diagnostics and treatment of otosclerosis, with accent on the LASER surgery procedure.