

## Secondary tracheoesophageal puncture and complications

Scherl C, Kauffels J, Schutzenberger A, Dollinger M, Bohr C, Durr S, et al. Secondary Tracheoesophageal Puncture After Laryngectomy Increases Complications With Shunt and Voice Prosthesis. *Laryngoscope*. 2020 Feb 6 [Epub ahead of print].

The objective of this retrospective analysis was to determine factors associated with tracheoesophageal puncture (TEP) complications and voice prostheses-complication-free survival (TEP/VP-CFS). The clinical records of 112 laryngectomized subjects during a five year-period were analyzed. Inclusion criteria were total laryngectomy (TL), with or without post-operative radiation and/or chemotherapy, and TEP and voice prosthesis (VP) placed between the years 1996 and 2015. In total 88.4% cases of TEPs with prosthesis placements were performed as primary procedures during laryngectomy. Complications were identified in 65.2% of all cases, the most common were peristo-

mal salivary leakage (50%) and enlargement of the TEP (47.3%). No serious complications (such as mediastinitis, prosthesis aspiration and esophageal perforation) were reported in this study. The study showed that TEP and VP placement after adjuvant radiotherapy, secondary prosthesis placement after primary surgery and laryngectomy with flap reconstruction were prognostic factors for TEP complications. Secondary prosthesis placement after adjuvant therapy or after primary surgery led to reduced TEP/VP-CFS. The study indicates that patients benefit from having their TEP and prosthesis placed during their primary surgery or at least before scheduled radiotherapy.

## Is satisfaction with voice prosthesis rehabilitation and QoL maintained over time?

Galli A, Giordano L, Biafora M, Tulli M, Di Santo D, Bussi M. Voice prosthesis rehabilitation after total laryngectomy: are satisfaction and quality of life maintained over time? *Acta Otorhinolaryngol Ital*. 2019;39(3):162-8.

Total laryngectomy is associated with a good clinical outcome in advanced stages of laryngeal cancer. However, permanent tracheostomy and loss of a natural voice is also associated with a decreased quality of life (QoL). In an earlier study (2011), the authors evaluated QoL and patient satisfaction after tracheoesophageal speech (TES) rehabilitation and were able to demonstrate positive results. In this study, QoL and TES-related satisfaction in the same cohort of patients were followed-up long-term (12 years or more after TEP procedure). QoL-related aspects such as social functioning, influence of physical limitations and emotional problems on activities or work were significantly improved since the initial evaluation. TES-related satisfaction was maintained over time and voice prosthesis duration increased significantly ( $6.3 \pm 3.1$  months compared to  $3.0 \pm 1.8$  months). The study also revealed that the few subjects who reported

dissatisfaction with TES as their choice of voice rehabilitation, lived further away from the institution of VP replacement in comparison to other patients. The authors therefore highlight the importance of a widespread network of VP management centers in order to enhance patient follow-up and enable future studies.



## A guided self-help exercise program improves swallowing and speech problems

Jansen F, Eerenstein SEJ, Cnossen IC, Lissenberg-Witte BI, de Bree R, Doornaert P, et al. Effectiveness of a guided self-help exercise program tailored to patients treated with total laryngectomy: Results of a multi-center randomized controlled trial. *Oral Oncol.* 2020;103:104586.

The aim of this multi-center randomized controlled trial was to investigate the effectiveness of a guided self-help exercise program on swallowing, speech and shoulder problems in patients treated with a total laryngectomy (TL). The self-help exercise program is part of a self-help program called "In Tune without Chords" (ITwC). The ITwC program also includes a self-education program on speech, nutrition and stoma care that has already been found to be feasible. Ninety-two patients were included in the study based on having had a TL in the past five years. The patients were randomized into two treatment groups; the intervention group provided with the self-help exercise program as well as the self-care education program, and the control group provided with only the self-care education program.

The groups were asked to complete questionnaires at baseline, at 3-months follow-up and at 6-months follow-up. The primary outcome measure was swallowing problems. Secondary outcome measures included speech problems and shoulder disability.

After 6 months, the intervention group experienced significantly less swallowing and communication problems compared to the control group. Moderation analyses showed that patients in the intervention group who were at 6 months post-laryngectomy when starting the program experienced significant speech improvements compared to the control group. This indicates that patients in their early rehabilitation phase could especially benefit from the exercise program in terms of speech outcomes.

## Experience with Provox Vega XtraSeal for periprosthetic leakage

Mayo-Yanez M, Cabo-Varela I, Suanzes-Hernandez J, Calvo-Henriquez C, Chiesa-Estomba C, Herranz Gonzalez-Botas J. Use of double flange voice prosthesis for periprosthetic leakage in laryngectomized patients: a prospective case-crossover study. *Clin Otolaryngol.* 2020 Feb 3 [Epub ahead of print].

Tracheoesophageal speech using voice prostheses (VPs) is considered the gold standard for voice rehabilitation following total laryngectomy. After endoprosthetic leakage, periprosthetic leakage is the most common cause for voice prosthesis failure. Device failure can require the prosthesis to be replaced as often as every 2-3 months. Periprosthetic leakage may put the patient at risk of aspiration pneumonia, elevation of costs, higher frequency of clinical visits and overall decrease in quality of life. Provox Vega XtraSeal is a silicone prosthesis with a double flange on the esophageal side designed to prevent periprosthetic leakage. The main objective of this prospective case-crossover study was to compare the device lifetime of Provox Vega and Provox Vega



XtraSeal in 20 laryngectomized patients with periprosthetic leakage problems. If the subject had more than three consecutive changes of their VP secondary to periprosthetic leakage, the subject switched to Provox XtraSeal at their VP replacement. The study shows that Provox Vega XtraSeal has a significantly longer mean device life-time (177 days) compared to Provox Vega (105 days) in patients with periprosthetic leakage. Provox Vega XtraSeal may therefore postpone the need for voice prosthesis replacement with a mean of two months in laryngectomized patients with periprosthetic leakage problems, in comparison to Provox Vega.

## Developing, maintaining, and improving clinician confidence

Hancock KL, Ward EC, Hill AE. Speech and language therapists' reflections on developing and maintaining confidence in tracheoesophageal speech rehabilitation. *Int J Lang Commun Disord*. 2020 Jan 2020;55(1):85-96.

What does it take to develop, maintain, and improve clinician confidence when managing patients who use tracheoesophageal speech (TES)? An Australian team used qualitative research methods to investigate this question. A total of 36 clinicians stratified into three groups (novice, intermediate, and experienced) participated in small focus groups guided by semi-structured interviews. Transcripts of these discussions were analyzed for themes. Four themes emerged as important for development of clinician confidence: training, exposure, support and mentorship, and leadership opportunities. Three themes were associated with maintenance and improvement of clinician skills in this niche area: management of a caseload, access to support, and training/further learning. Training was identified by all groups as important, however for experienced clinicians, this included advanced discussions

that consider the continuum of care and patient complexity. Access to ongoing support was critical to all groups in developing, maintaining, and improving confidence in their TES management skills.



## Nasal dysfunction after laryngectomy

Ayoub N, Kearney A, Sayyid ZN, Erickson-DiRenzo E, Jeffrey C, Hwang PH. Nasal Symptoms Following Laryngectomy: A Cross-sectional Analysis. *Am J Rhinol Allergy*. 2020 Jan 21;34(3):388-93.

Total laryngectomy disrupts the nasal airflow, which is known to cause significant alterations to the nasal cavity function and physiology in laryngectomized patients. In this cross-sectional analysis, subjective and objective outcome measures were compared between two cohorts of patients with past treatment of laryngeal cancer. Thirty-six laryngectomees treated with or without radiation or chemotherapy, and twelve non-laryngectomees treated with radiation therapy were included in the study. Patient-reported outcome measures (PROMs) on sinonasal symptoms were collected based on a recent two-week period. Objective outcome measures were collected by assessment of nasal endoscopies.

Results showed that laryngectomees are likely to experience both objective and subjective nasal disease to a higher extent than non-laryngectomees. Laryngectomized patients are more likely to have nasal congestion, sneezing, rhinorrhea, postnasal drip and poorer sense of smell. The nasal endoscopy findings showed that laryngectomees had significantly higher scores for edema. The authors conclude that post-laryngectomy nasal dysfunction may be a key factor contributing to a diminished quality of life in laryngectomized patients.