

A new speaking valve for tracheotomized patients: ProTrach DualCare

de Kleijn BJ, van As-Brooks CJ, Wedman J, van der Laan BFAM. Clinical feasibility study of ProTrach DualCare a new speaking valve with heat and moisture exchanger for tracheotomized patients. *Investigative Otolaryngology*. 2017 Nov;27.

This study was conducted to determine the clinical feasibility of the ProTrach DualCare, a hands-free speaking valve with an HME. Tracheotomized patients were asked to compare the ProTrach DualCare to their pre-study devices (speaking valves and/or HMEs). The participants completed study-specific questionnaires at the start of the study, after two weeks use of the new device (n=16) and after the optional long-term evaluation (n=11). The EuroQOL-5D, Borg scale and questionnaires on speaking, pulmonary function and patient preference were used. Overall, 11 of 16 participants preferred the DualCare over their pre-study speaking valve or HME at the short term follow up, and all participants (n=11) at the long term evaluation. Participants indicated significantly better voice and speech sound, less noise during speech and a more natural voice. The authors conclude that ProTrach DualCare is clinically feasible and has the potential to improve quality of life of tracheotomized patients.



Are patient education materials understandable?

Wong K, Gilade A, Cohen MB, Kirke DN, Jalisi SM. Patient education materials assessment tool for laryngectomy health information. *Head Neck*. 2017 Nov;39(11):2256-2263.

The validated Patient Education Materials Assessment Tool (PEMAT) was used to evaluate understandability and actionability for 44 online laryngectomy-related patient educational materials. Reading difficulty was calculated using 6 different readability formulas. With an average understandability score of 68.5% and an average actionability score of 65.9%, the minimum PEMAT score for adequate reader comprehension of 70%

was not exceeded. The average reading difficulty was above the level recommended by the American Medical Association and the National Institutes of Health, exceeding the ability of an average American adult. The authors conclude that most laryngectomy information is too difficult for the average laryngectomized patient to read, understand, or act upon. Revisions may be warranted to benefit a larger readership.

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Loss of survival in T4 patients after larynx preservation

Dyckhoff G, Plinkert PK, Ramroth H. A change in the study evaluation paradigm reveals that larynx preservation compromises survival in T4 laryngeal cancer patients. *BMC Cancer*. 2017 Sep 1;17(1):609.

In this observational cohort study, overall survival (OS) for T4 laryngeal cancer treatment with primary chemo-radiotherapy (CRT) or primary radiotherapy alone (RT) was compared with upfront total laryngectomy followed by adjuvant (chemo)radiotherapy (TL + a[C]RT). During a seven-year recruitment period, 810 laryngeal cancer patients were identified, including 288 patients (37.5%) classified as advanced stage III and IV. A subgroup analysis of the T4 tumor patients alone (N = 107; 13.9%) revealed significantly worse OS after treatment with CRT compared with TL + a[C]RT ($p=0.0369$). The significant loss of survival, was further confirmed when

reevaluating the literature cited in ASCO, the American Society of Clinical Oncology's guidelines for the use of larynx preservation strategies. The reevaluated data showed a strong indication that the T4 laryngeal cancer subgroup has a significantly worse outcome when treated non-surgically. The authors conclude C(RT) should not be recommended as equivalent to TL. Therefore T4 laryngeal cancer patients who reject TL as a treatment option should be informed that their chance of organ preservation with primary conservative treatment is likely to result in a significantly worse outcome in terms of OS.

20 years of hypopharynx cancer in the Netherlands

Petersen JF, Timmermans AJ, Van Dijk BAC, Overbeek LIH, Smit LA, Hilgers FJM, Stuiver MM, van den Brekel MWM, Trends in treatment, incidence and survival of hypopharynx cancer: a 20-year population-based study in the Netherlands. *Eur Arch Otorhinolaryngol* 2017. 2017 Oct 28.



In this study, the authors investigated the national trends in treatment, incidence and survival for patients diagnosed with T1-T4 hypopharynx cancer during 1991-2010 in the Netherlands. Data of 2999 patients were retrieved from databases of the Netherlands

Cancer Registry (NCR) and PALGA (the nationwide network and registry of histo- and cytopathology in the Netherlands). The study demonstrated a shift in treatment preference towards organ preservation therapies, with a significant decline in total laryngectomy (TL) and a significant increase in radiotherapy (RT) and chemoradiotherapy (CRT) since 2001. Overall survival (OS) for T3 was not significant different between patients treated with TL and CRT. However, a significant difference was found for T4 tumors, where TL was associated with a higher 5-year OS rate compared to CRT and RT. The authors question the assumed equivalence of CRT and TL for T4 tumors and suggests that all T4 patients should be counseled on the potentially better chance for survival using TL, as compared to (C)RT.

Provox Vega and Provox2 voice prostheses: a comparison

Serra A, Spinanto G, Spinanto R, Conti A, Licciardello L, Di Luca M, Campione G, Tonoli G, Polti D, Castro V, Maniaci A, Maiolino L, Cocuzza S. Multicenter prospective crossover study on new prosthetic opportunities in post-laryngectomy voice rehabilitation. *J Biol Regul Homeost Agents*. 2017 Jul-Sep;31(3):803-809.

In this multicenter prospective crossover study Provox2 and Provox Vega were evaluated in terms of device life and voice outcome for the same study subjects. Enrolled patients were categorized and divided into four groups: group A – 22 patients under 75 years of age with no experience of radiotherapy or other treatments, group B – 19 patients had postoperative radiation therapy before tracheoesophageal puncture (TEP); group C – 21 patients with gastroesophageal reflux disease (GERD); and group D – 20 patients over 75 with no experience of radiotherapy or other treatments. The average device life for Provox 2 was 165 days for group A, 148 days for B, 91 days for C, and 188 days for D. For Provox Vega, the mean device time was 213 days for group A, 182 days

for group B, 118 days for group C, and 227 days for group D. Overall, average lifetime was 146 days for Provox2 and 182 days for Provox Vega ($P=0.046$). The perceptual voice data showed a better rating across all parameters for the Provox Vega samples compared to those for Provox 2. These results confirm an optimal stability of the Provox Vega compared to the Provox 2, in terms of device life and perceptual voice parameters.



Voice and swallowing problems after laryngectomy

Arenaz Bua B, Pendleton H, Westin U, Rydell R. Voice and swallowing after total laryngectomy. *Acta Otolaryngol*. 2017 Oct 5:1-5.

To evaluate the occurrence of voice and swallowing problems following laryngectomy, 45 patients, laryngectomized in the South of Sweden between 2000 and 2016, were included. They were asked to complete the Swedish version of the Sydney Swallow Questionnaire (SSQ) and the Voice Handicap Index-T (VHI-T). In the SSQ, swallowing problems were reported by 89% of the patients. For the VHI-T, two thirds (66%) of the patients scored a moderate-to-severe voice handicap. Newly laryngectomized patients reported a more severe voice handicap than those who had been operated

a long time ago ($p \leq 0.04$). For 62% of the patients additional therapeutic interventions were required to manage the swallowing and/or voice problems. In conclusion, swallowing and voice problems are frequent after TL. The authors suggested that further therapeutic strategies are needed to improve functional results and the quality of life.