Tracheostomy Speaking Valves with HME


Recently there are three Tracheotomy Speaking-Valves (TSV) available with integrated heat and moisture exchanger (HME). This study investigated the humidifying function of these three products: Humidiphone Plus (Fahl), Spiro (Teleflex/Rüsch Medical) and ProTrach DualCare (Atos Medical). Water exchange capacity, absolute humidity and breathing volume were measured using an ex-vivo method. None of the TSVs showed humidification function in speaking mode. Only DualCare, allowing the blocking of the speaking valve, showed a significant increase in humidification in HME-mode. The authors conclude that with DualCare patients do not have to replace the speaking-valve by an HME, but can just switch to HME-mode to increase overall airway humidification.

Voice, speech and swallowing in laryngeal cancer


The interest in outcomes of patient-reported questionnaires on voice (VHI), speech (SHI), swallowing (SWAL-QOL), quality of life (QLQ-C30, QLQ-HN35) and psychological distress (HADS) after treatment of laryngeal cancer is growing, as the treatment options to improve functional outcomes have increased. The objectives of this study were to validate these questionnaires among laryngeal cancer patients, and to investigate the prevalence of voice, speech and swallowing problems, and their association with health-related quality of life. The authors concluded that the psychometric characteristics of the VHI, SHI and SWAL-QOL were good. Furthermore, they found a high prevalence of voice (56%), speech (63%) and swallowing (44%) problems in post-treatment laryngeal cancer patients, strongly related to quality of life and emotional distress. The expressed need for rehabilitation services appeared to be low (8%), especially after treatment.
Psychological problems in laryngeal cancer patients?


This study has assessed sexual function, affective disorders and self-esteem in patients who were surgically treated for laryngeal cancer. Data were available for 74 patients. A comparison was made between patients with a Total Laryngectomy (TL, n=49) and patients with a Partial Laryngectomy (PL, n=25). All patients were male. The patients in the TL group were significantly older than in the PL group. Instruments used were the Arizona Sexual Experiences Scale (ASEX), Beck’s Depression Inventory (BDI) and Rosenberg Self-Esteem Scale (RSES). Results show that there is no significant difference in sexual function between the two groups. However, 29 of 49 TL patients and 17 of 25 PL patients showed sexual dysfunction. Also no difference was found in self-esteem of the patients. There was a significant difference in the depression scores, with the TL patients scoring worse than the PL patients. Authors conclude therefore that TL patients seem to have more psychological problems that need to be addressed in the post-operative period.

Trade off: survival or quality of life


Concurrent chemoradiotherapy has become the first-line management for locally advanced laryngeal cancer. However, recently this practice has been questioned, as the overall survival form advanced laryngeal cancer has been affected adversely. McNeil (1981) investigated the tradeoffs between quality and quantity of life, finding that not all patients valued survival at any price. This study is a re-evaluation of McNeil’s trade off experiment, to assess the importance of survival on treatment choice. The authors concluded that larynx preservation may not be the priority of all patients. Quality of the treatment outcome had a greater effect on health state utility values than treatment modality.
Laryngectomy and HME


This study investigated respiratory functions and quality of life in HME-naïve patients in the first weeks of using Provox XtraHME. Data were collected at 2 weeks, 6 weeks and 12 weeks follow-up. The authors found a significant decrease in daily average number of coughs and forced expectorations, already after 2 weeks. Further improvement of pulmonary status was seen after 6 weeks, stabilizing over time. Furthermore, more general physical complaints such as shortness of breath, fatigue, mucus production, feelings of fear, and anxiety also significantly decreased, with an increase of general quality of life. Patient satisfaction with the HME was high.

Cost-effectiveness of HMEs


This study investigated the cost-effectiveness of heat and moisture exchangers (HMEs) compared to usual care (UC) in patients after laryngectomy in Poland, in terms of costs per additional quality-adjusted life years (QALYs). The total health care costs per patient were 39,443 PLN (9465 Euro) for the HME strategy versus 4889 PLN (1168 Euro) for UC. The difference in quality-adjusted survival between HMEs (3.63 QALYs) versus UC (2.95 QALYs) was substantial. HME use resulted in fewer pulmonary infections, and less sleeping problems. The authors conclude that the use of HMEs is less costly and more effective compared to the usual care.