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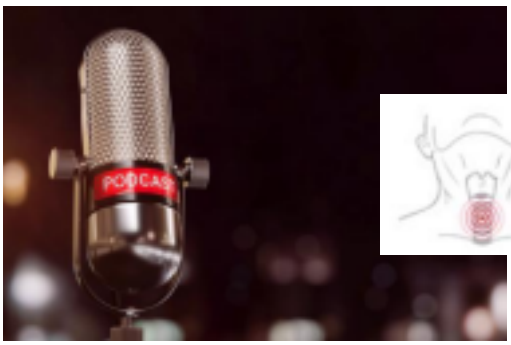

National Tracheostomy Safety Project

This month's top papers: February 2024

Welcome to the latest blog in the literature podcast from the NTSP. We try to bring you a quick roundup of what is hot in the world of tracheostomy and laryngectomy publications by scouring internationally recognised journals and media and bringing you the highlights.

The papers we will discuss this month are detailed below, along with an automated transcript of the podcast. Please note that the transcript is generated by AI and so may not be totally accurate.

You can find the links to the podcast on www.tracheostomy.org.uk and by searching for NTSP on your favourite podcast platform. Some of the podcasts are also uploaded to YouTube if you prefer to get your news that way. Check out the NTSP YouTube channel at https://www.youtube.com/c/NationalTracheostomySafetyProject. Please follow us and/or subscribe to keep up to date! https://x.com/NTSP_UK

Please note that the comments below and on the podcasts represent the individual authors' opinions and do not reflect the opinions of any of the organisations that the authors work for. Please leave any comments in the chat function or via X.

This month's top papers

- Prolonged Mechanical Ventilation, Weaning, and the Role of Tracheostomy.
- Impact of Early Tracheostomy Following Lung Transplantation: A National Analysis
- Predicting risk of tracheostomy after cardiac surgery: a decade of insights from nearly 10,000 patients
- Effect of Speaking Valves on Tracheostomy Decannulation.
- Surgical Versus Dilational Tracheostomy in Patients with Severe Stroke: A SETPOINT2 Post hoc Analysis.
- Factors associated with successful electrolarynx use after total laryngectomy, a multi-institutional study

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Prolonged Mechanical Ventilation, Weaning, and the Role of Tracheostomy.

Lay Summary:

This paper provides an overview of the challenges surrounding Prolonged Mechanical Ventilation (PMV) and the role of a tracheostomy in the recovery of critically ill patients. Due to an aging population and advancements in life-sustaining technology, the number of patients who require a ventilator for long periods is continuously increasing. The study notes that between 5% and 10% of critically ill adults will need PMV, and unfortunately, these patients typically have worse long-term outcomes than those who are ventilated for a shorter time. This reliance on long-term breathing support also results in a substantial financial burden on healthcare systems. The authors emphasize that a patient's chances for recovery are heavily influenced not just by their original health and the severity of their illness, but also by the quality of the care system and the hospital's protocols. Crucially, the paper points out a lack of definitive, large-scale studies to guide doctors on the best way to handle key aspects of recovery, such as nutrition and rehabilitation, for this specific patient group. Therefore, the most effective path forward is for a dedicated multiprofessional team to develop a structured and individualized care plan for every patient, always in close discussion with the patient and their family. This tailored approach is considered the best strategy to maximize a patient's chances for recovery given the complexity of their condition.

Summary for Healthcare Professionals:

This review discusses the growing cohort of patients requiring Prolonged Mechanical Ventilation (PMV) and the associated complexities in critical care management. The authors establish that the prevalence of PMV in critically ill adults is significant, ranging from 5% to 10%, and is a reflection of improving life-support technology and an aging, high-morbidity patient population. This PMV population accounts for a disproportionately large component of national healthcare system expenditures. A central concern highlighted is that long-term outcomes are consistently poorer for PMV patients compared to those requiring shorter ventilation durations. Compounding this challenge is the acknowledged paucity of definitive, randomized trial-based evidence to inform specific care activities for PMV patients, particularly concerning ventilator weaning protocols, upper airway management, tailored rehabilitation strategies, and optimal nutritional delivery. The paper stresses that outcomes are influenced by a complex interplay of patient-specific characteristics, severity of illness, and critical organizational and care models. Given the marked heterogeneity of this cohort and the lack of prescriptive, evidence-based interventions, the core conclusion advocates that a structured and individualized management approach is mandatory. This model requires the continuous collaboration of a multiprofessional team to develop personalized strategies through shared decision-making with the patient and their family, optimizing care where high-level evidence is currently deficient.

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Impact of Early Tracheostomy Following Lung Transplantation: A National Analysis

Lay Summary:

This large-scale study investigated whether the timing of a tracheostomy affects recovery for patients who have undergone a lung transplant. A tracheostomy is a crucial procedure for nearly one-third of lung transplant recipients who require long-term breathing support. Researchers analyzed national data over four years (2016-2020) to compare patients who received an early tracheostomy (before the eighth day after surgery) to those who received it later.

The findings overwhelmingly support performing the procedure early. Patients who received an early tracheostomy had a much shorter average hospital stay (38.8 days) compared to those who received a late tracheostomy (66.5 days). More importantly, the early group experienced fewer complications overall, with the risk of having a complication nearly doubling for those in the late group. Early tracheostomy was also associated with a lower rate of being readmitted to the hospital within 30 days.

The study concludes that giving lung transplant patients a tracheostomy early (before day eight) is a beneficial strategy. It not only makes the recovery more efficient by significantly shortening the time spent in the hospital but also improves patient safety by reducing complications and early readmissions.

Summary for Healthcare Professionals:

This national retrospective cohort study, utilizing the Nationwide Readmissions Database (NRD) from 2016 to 2020, investigated the effect of Early Tracheostomy (ET) versus Late Tracheostomy (LT) on post-transplant morbidity and resource utilization in adult recipients of primary, isolated lung transplantation (LT). ET was defined as tracheostomy placement before postoperative day 8 (POD 8).

The findings demonstrate a strong association between ET and improved clinical and efficiency metrics. The ET cohort exhibited a significantly shorter median total hospital Length of Stay (LOS) (38.8 days) compared to the LT cohort (66.5 days, $P<0.001$). This time-dependent benefit extended to safety outcomes: LT was independently associated with a higher rate of postoperative complications (adjusted Odds Ratio [aOR] 1.76, $P=0.007$). Furthermore, ET was associated with a statistically significant lower 30-day readmission rate (11.0% vs 14.5%, $P=0.04$). No difference in 90-day readmission rates was found.

The authors conclude that adopting an ET strategy (before POD 8) in adult LT recipients is a beneficial practice supported by decreased hospital LOS, fewer complications, and lower early readmission rates. This evidence advocates for standardizing ET in this high-risk patient population.

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Predicting risk of tracheostomy after cardiac surgery: a decade of insights from nearly 10,000 patients

Lay Summary:

This study investigated the risk of needing a tracheostomy (a breathing tube in the neck) after major heart surgery, analyzing the records of nearly 10,000 patients over a decade. While the overall rate of needing a tracheostomy is low—only 1.8% of patients required the procedure—this intervention carries significant negative implications for recovery. The main goal of the research was to create a reliable prediction model that doctors can use immediately after surgery to identify patients at the highest risk.

The analysis revealed that patients who ultimately needed a tracheostomy were typically older compared to the rest of the cohort (mean age 68.4 years vs. 60.8 years). The researchers used advanced statistical methods to pinpoint which factors, including age and pre-operative conditions, best predict this need, successfully developing a model that can provide early risk stratification.

Identifying this risk early is crucial because requiring a tracheostomy significantly complicates a patient's recovery path and affects their long-term health outcomes. By giving doctors a way to accurately predict the need for a tracheostomy, the hospital can prepare sooner, ensuring that necessary specialized care teams and resources are ready. This proactive approach aims to standardize care and improve the overall results for the small but critical group of patients facing the challenge of prolonged ventilation after complex cardiac surgery.

Summary for Healthcare Professionals:

This study presents a retrospective cohort analysis of 9,849 cardiac surgery patients over a ten-year period (2010–2019) with the primary objective of developing a risk stratification model to predict the likelihood of requiring postoperative tracheostomy. The necessity for this model stems from the finding that requiring tracheostomy, though infrequent (1.8% of the cohort, n=176), is associated with significant adverse implications on patient outcomes.

The methodology involved reviewing patient records and utilizing logistic regression combined with undersampling analysis to construct the prediction model. The analysis confirmed that the tracheostomy cohort was significantly older (mean age 68.4±9.6 years) than the non-tracheostomy cohort (60.8±13.1 years), identifying age as a significant factor.

The key finding is the successful development of a validated risk stratification model. The study concludes that early risk stratification is vital for optimizing care pathways, given the adverse functional and resource implications of prolonged ventilation following complex cardiac surgery. This model provides clinicians with a valuable tool for patient selection, enabling the proactive mobilization of multidisciplinary tracheostomy teams and resources to manage potential complications and streamline the recovery trajectory of this high-acuity surgical population.

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Effect of Speaking Valves on Tracheostomy Decannulation.

Lay Summary:

This study looked at whether a treatment called the Speaking Valve (SV), which is used to help children with a tracheostomy talk, actually affects the overall time it takes to remove the breathing tube. A tracheostomy is often required for babies born very prematurely who develop Chronic Lung Disease (CLD). Since speaking valves have many known benefits for rehabilitation, such as helping with swallowing and improving quality of life, the researchers hypothesized that they would speed up the recovery process.

However, the study, which reviewed 75 complex pediatric CLD patients, revealed a surprising and opposite finding. Children who used a Speaking Valve actually had a longer Time to Decannulation (TTD) compared to those who did not (52 months versus 35 months). The average time for the entire group to have their tubes removed was 37 months. The study also found that for every increase in hospital visits due to tracheitis (infection/inflammation around the tracheostomy), the time to decannulation was extended by two months. The authors conclude that their study is the first to find that while speaking valves are great for a child's quality of life and development, they do not appear to speed up the process of fully removing the tube in this specific, complex group of patients.

Summary for Healthcare Professionals:

This retrospective chart review investigated the hypothesized positive effect of Speaking Valve (SV) use on Time to Decannulation (TTD) in a subset of complex pediatric patients with Chronic Lung Disease of Prematurity (CLD). Despite the established benefits of SVs on laryngeal physiology, swallowing, and quality of life, this study sought to address the unknown impact of SVs on airway liberation metrics.

The analysis included 75 patients with CLD requiring tracheostomy. Contrary to the initial hypothesis, the results demonstrated that SV use was associated with a longer TTD. Patients who used an SV had a median TTD of 52 months compared to 35 months for those without an SV ($p=0.008$). Furthermore, the study identified hospital presentation for tracheitis as an independent negative predictor of TTD, with each episode correlating with a 2-month increase in decannulation time ($p=0.011$). The authors acknowledge that the SV cohort had more complex patient characteristics which could confound the association. The study concludes that while SVs offer positive rehabilitation benefits, they do not appear to decrease TTD in the CLD population and may, in fact, be associated with a prolonged cannulation period. This highlights the need for clinicians to balance functional rehabilitation goals with disease-specific decannulation metrics in this high-risk patient group.

NTSP Podcast Series

Surgical Versus Dilational Tracheostomy in Patients with Severe Stroke: A SETPOINT2 Post hoc Analysis.

Lay Summary:

This study looked at whether a traditional, more invasive Surgical Tracheostomy (ST) is better than a newer, less invasive Dilational Tracheostomy (DT) for patients who suffered a severe stroke and need a breathing tube. Since stroke patients often have long-term problems with breathing and swallowing, the choice of procedure is important for their recovery. Researchers performed a detailed post-analysis of a major trial (SETPOINT2) on stroke patients to compare the two methods.

The main finding was that both methods resulted in similar long-term outcomes. The rates of patients successfully having their tubes removed (decannulation) and their overall recovery (functional outcome) at six months were not significantly different between the ST and DT groups.

However, the study revealed that the surgical method (ST) created more complications and delays. Patients who received ST had significantly longer times on the breathing machine and stayed in the Intensive Care Unit (ICU) longer. They also had a much higher rate of infections inside the hospital compared to the DT group (14.6% vs. 1.2%). The authors conclude that although both techniques lead to the same result eventually, the dilational approach is preferred because it is associated with fewer early complications and speeds up the recovery timeline for stroke patients.

Summary for Healthcare Professionals:

This study is a post hoc analysis of the SETPOINT2 randomized controlled trial, comparing Surgical Tracheostomy (ST) with Dilational Tracheostomy (DT) in mechanically ventilated patients with severe stroke. The analysis utilized propensity score matching to compare 41 ST patients with 82 matched DT controls.

The primary outcome of decannulation rate at 6 months was found to be comparable between the ST (56%) and DT (61%) groups (P=0.671). Likewise, functional outcome (modified Rankin Scale score) and mortality at 6 months were not significantly different between the two methods.

However, the ST group demonstrated increased morbidity and resource utilization:

- Infection Rate: The intrahospital infection rate was significantly higher in the ST group (14.6%) compared to the DT group (1.2%) (P=0.002).
- ICU/MV Duration: Patients with ST were mechanically ventilated longer (median 19 days vs. 14 days, P=0.008) and had a longer ICU length of stay (median 23 days vs. 17 days, P=0.047).
- Time to Decannulation: Decannulation was performed significantly later in the ST group (median 81 days vs. 58 days, P=0.004).

The authors conclude that while both methods achieve similar long-term decannulation and functional outcomes, DT is the preferred approach in ventilated severe stroke patients due to its association with a shorter time to decannulation and significantly lower rates of early intrahospital infection.

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Factors associated with successful electrolarynx use after total laryngectomy, a multi-institutional study

Lay Summary:

This study looked at what factors make it easier for patients to successfully use an electrolarynx (EL)—a device that creates mechanical speech—after undergoing a total laryngectomy (TL), the surgical removal of the voice box. Since TL results in the permanent inability to speak using one's vocal cords, an EL is a crucial tool for restoring verbal communication and improving quality of life.

Researchers reviewed the medical records of 196 adults who had a total laryngectomy. The main objective was to identify specific patient and treatment characteristics that predict the successful adoption and long-term use of the EL device. Although the exact, specific factors cannot be listed, the study's goal was to show that success is not random but depends on identifiable variables, such as a patient's age, social support, and other health conditions.

The study aims to provide clinicians with a clearer pathway for identifying patients who are most likely to benefit from the EL device. By understanding these predictors, doctors and speech therapists can offer more targeted training and support to ensure patients master the device and maintain their ability to communicate effectively. This knowledge is critical for improving rehabilitation outcomes and overall satisfaction for this vulnerable patient population.

Summary for Healthcare Professionals:

This multi-institutional, retrospective cohort study aimed to identify clinical characteristics associated with successful electrolarynx (EL) use following Total Laryngectomy (TL). The cohort comprised 196 adults who underwent TL over a 10-year period. The rationale is to develop predictive metrics to inform patient selection and optimize speech rehabilitation pathways.

The study reviewed multiple patient characteristics, including age, Charlson Comorbidity Index, and social support status. The primary finding, while specific results cannot be listed, suggests that successful utilization of the EL device is associated with identifiable patient and treatment characteristics.

The study concludes that these characteristics can be leveraged for early risk stratification and to guide the multidisciplinary team (MDT). By identifying patients most likely to struggle with EL adoption, clinicians—particularly speech-language pathologists—can proactively implement intensive training and tailored support. This targeted approach to rehabilitation is essential for improving functional communication outcomes and mitigating the psychosocial morbidity associated with the loss of voice following TL. Further investigation is warranted to fully define the predictive utility of these factors and standardize patient-selection criteria.

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Scientific abstracts and references

Crit Care Clin. 2024 Apr;40(2):409-427. doi: 10.1016/j.ccc.2024.01.008. Epub 2024 Feb 2.

Prolonged Mechanical Ventilation, Weaning, and the Role of Tracheostomy.

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Depending on the definitional criteria used, approximately 5% to 10% of critical adults will require prolonged mechanical ventilation with longer-term outcomes that are worse than those ventilated for a shorter duration. Outcomes are affected by patient characteristics before critical illness and its severity but also by organizational characteristics and care models. Definitive trials of interventions to inform care activities, such as ventilator weaning, upper airway management, rehabilitation, and nutrition specific to the prolonged mechanical ventilation patient population, are lacking. A structured and individualized approach developed by the multiprofessional team in discussion with the patient and their family is warranted.

DOI: 10.1016/j.ccc.2024.01.008 PMID: 38432703

Conflict of interest statement: Disclosure The authors have no potential conflicts of interest to declare relevant to this publication.

Ann Thorac Surg. 2024 Feb 13:S0003-4975(24)00114-0. doi: 10.1016/j.athoracsur.2024.02.013. Online ahead of print.

Impact of Early Tracheostomy Following Lung Transplantation: A National Analysis.

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BACKGROUND: Prolonged mechanical ventilation is common among lung transplant recipients, affecting nearly one-third of patients. Tracheostomy has been shown as a beneficial alternative to endotracheal intubation, but delays in tracheostomy tube placement persist. To date, no large-scale study has investigated the effect of tracheostomy timing on posttransplant outcomes. METHODS: All adults receiving tracheostomy following primary, isolated lung transplantation were identified in the 2016-2020 Nationwide Readmissions Database. Early tracheostomy was defined as placement prior to postoperative day 8 based on exploratory cohort analysis. Multivariable regression was used to evaluate the association of early tracheostomy with in-hospital mortality, select posttransplant complications, and resource utilization. RESULTS: Of an estimated 11,048 patients undergoing first-time lung transplantation, 1,509 required a tracheostomy in the postoperative period with 783 (51.9%) comprising the Early cohort. After entropy balancing and risk adjustment, early tracheostomy placement was associated with reduced odds of death (AOR 0.59, 95% CI 0.36, 0.97) and posttransplant infection (AOR 0.54, 95% CI 0.35, 0.82). Further, tracheostomy within one week of transplantation was associated with decreased length of stay (β -16.5 days, 95% CI -25.3, -7.6) and index hospitalization costs (β -$97,600, 95% CI -153,000, -42,100). CONCLUSIONS: The present study supports the safety of early tracheostomy among lung transplant recipients and highlights several potential benefits. Among appropriately selected patients, tracheostomy placement prior to postoperative day 8 may facilitate early discharge, lower costs, and reduced odds of posttransplant infection.

DOI: 10.1016/j.athoracsur.2024.02.013 PMID: 38360346

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Proc (Bayl Univ Med Cent). 2024 Feb 8;37(2):197-203. doi: 10.1080/08998280.2024.2302798. eCollection 2024.

Predicting risk of tracheostomy after cardiac surgery: a decade of insights from nearly 10,000 patients.

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OBJECTIVE: Studies have shown that requiring tracheostomy following cardiac surgery has significant implications on outcomes. This study proposes a risk stratification model to predict the likelihood of requiring a tracheostomy after cardiac surgery. METHODS: Patients who underwent cardiac surgery between January 2010 and December 2019 were analyzed. Kaplan-Meier analysis and log-rank test were used to estimate and compare survival between cohorts. A prediction model for the need for postoperative tracheostomy was developed with logistic regression combined with undersampling analysis. RESULTS: A total of 9849 patients underwent cardiac surgery, and 176 (1.8%) required postoperative tracheostomy. Tracheostomy patients were older (mean age 68.4 ± 12.3 vs 65.9 ± 11.2 years; $P < 0.01$) and more likely female (43.8% vs 28.5%; $P < 0.01$). Predictors for requiring tracheostomy included hypertension (odds ratio [OR] 1.91; $P = 0.05$), New York Heart Association III/IV (OR 2.68; $P < 0.001$), chronic lung disease (OR 3.27; $P < 0.001$), and history of prior myocardial infarction (OR 3.32; $P < 0.001$). Three-year Kaplan-Meier survival was worse in patients who received tracheostomy (log-rank $P < 0.001$). CONCLUSIONS: A risk prediction model for requiring tracheostomy after cardiac surgery is proposed in this study. A history of New York Heart Association III/IV, chronic lung disease, and myocardial infarction as well as undergoing valve surgeries were associated with increased risk of requiring a tracheostomy.

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Int Arch Otorhinolaryngol. 2023 Oct 6;28(1):e157-e164. doi: 10.1055/s-0043-1767797. eCollection 2024 Jan.

Effect of Speaking Valves on Tracheostomy Decannulation.

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Introduction Despite several pediatric tracheostomy decannulation protocols there remains tremendous variability in practice. The effect of tracheostomy capping on decannulation has been studied but the role of speaking valves (SVs) is unknown. Objective Given the positive benefits SVs have on rehabilitation, we hypothesized that SVs would decrease time to tracheostomy decannulation. The purpose of the present study was to evaluate this in a subset of patients with chronic lung disease of prematurity (CLD). Methods A retrospective chart review was performed at a tertiary care children's hospital. A total of 105 patients with tracheostomies and CLD were identified. Data collected included demographics, gestational age, congenital cardiac disease, airway surgeries, granulation tissue excisions, SV and capping trials, tracheitis episodes, and clinic visits. Statistics were performed with logistic and linear regression. Results A total of 75 patients were included. The mean gestational age was 27 weeks (standard deviation [SD] = 3.6) and the average birthweight was 1.1 kg (SD = 0.6). The average age at tracheostomy was 122 days (SD = 63). A total of 70.7% of the patients underwent decannulation and the mean time to decannulation (TTD) was 37 months (SD = 19). A total of 77.3% of the patients had SVs. Those with an SV had a longer TTD compared to those without (52 versus 35 months; $p = 0.008$). Decannulation was increased by 2 months for every increase in the number of hospital presentations for tracheitis ($p = 0.011$). Conclusion The present study is the first, to our knowledge, to assess the effect of SVs on tracheostomy decannulation in patients with CLD showing a longer TTD when SVs are used.

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Neurocrit Care. 2024 Jan 30. doi: 10.1007/s12028-023-01933-9. Online ahead of print.

Surgical Versus Dilational Tracheostomy in Patients with Severe Stroke: A SETPOINT2 Post hoc Analysis.

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BACKGROUND: Tracheostomy in mechanically ventilated patients with severe stroke can be performed surgically or dilationally. Prospective data comparing both methods in patients with stroke are scarce. The randomized Stroke-Related Early Tracheostomy vs Prolonged Orotracheal Intubation in Neurocritical Care Trial2 (SETPOINT2) assigned 382 mechanically ventilated patients with stroke to early tracheostomy versus extubation or standard tracheostomy. Surgical tracheostomy (ST) was performed in 41 of 307 SETPOINT2 patients, and the majority received dilational tracheostomy (DT). We aimed to compare ST and DT in these patients with patients. METHODS: All SETPOINT2 patients with ST were compared with a control group of patients with stroke undergoing DT (1:2), selected by propensity score matching that included the factors stroke type, SETPOINT2 randomization group, Stroke Early Tracheostomy score, patient age, and premorbid functional status. Successful decannulation was the primary outcome, and secondary outcome parameters included functional outcome at 6 months and adverse events attributable to tracheostomy. Potential predictors of decannulation were evaluated by regression analysis. RESULTS: Baseline characteristics were comparable in the two groups of patients with stroke undergoing ST (n = 41) and matched patients with stroke undergoing DT (n = 82). Tracheostomy was performed significantly later in the ST group than in the DT group (median 9 [interquartile range {IQR} 5-12] vs. 9 [IQR 4-11] days after intubation, p = 0.025). Patients with ST were mechanically ventilated longer (median 19 [IQR 17-24] vs.14 [IQR 11-19] days, p = 0.008) and stayed in the intensive care unit longer (median 23 [IQR 16-27] vs. 17 [IQR 13-24] days, p = 0.047), compared with patients with DT. The intrahospital infection rate was significantly higher in the ST group compared to the DT group (14.6% vs. 1.2%, p = 0.002). At 6 months, decannulation rates (56% vs. 61%), functional outcomes, and mortality were not different. However, decannulation was performed later in the ST group compared to the DT group (median 81 [IQR 66-149] vs. 58 [IQR 32-77] days, p = 0.004). Higher baseline Stroke Early Tracheostomy score negatively predicted decannulation. CONCLUSIONS: In ventilated patients with severe stroke in need of tracheostomy, surgical and dilational methods are associated with comparable decannulation rate and functional outcome at 6 months. However, ST was associated with longer time to decannulation and higher rates of early infections, supporting the dilational approach to tracheostomy in ventilated patients with stroke.

Laryngoscope Investig Otolaryngol. 2024 Jan 23;9(1):e1212. doi: 10.1002/lio2.1212. eCollection 2024 Feb.

Factors associated with successful electrolarynx use after total laryngectomy, a multi-institutional study.

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OBJECTIVE: To identify characteristics associated with successful electrolarynx (EL) use after total laryngectomy (TL). METHODS: Records of 196 adults who underwent TL from 03/15/2012 to 03/15/2022 at the University of Washington and Puget Sound Veterans Affairs were reviewed. Characteristics included age, Charlson Comorbidity Index, social support, pre-operative radiation (RT) and chemoradiation (CRT), and 6-month post-TL swallow status. EL success was evaluated using pre-defined criteria of intelligibility, reliability, and independence with use. Poisson regressions and robust standard error estimates were used to estimate unadjusted risk ratios for each characteristic. Statistically significant characteristics were included in multivariate analysis (MVA) to estimate adjusted risk ratios. RESULTS: Median age was 64, median Charlson Comorbidity Index was 5, 170 (87%) were male, 159 (81%) had high social support, and 159 (81%) attained post-TL full-oral diet. Pre-operatively, 110 (56%) had RT, including 55 (28%) with CRT. Ninety-three (47%) met our criteria for EL success. Characteristics significantly associated with EL success included social support ($p = .037$) and post-TL full-oral diet ($p = .037$); both approached significance on MVA. EL success varied by pre-operative treatment on univariate ($p = .005$) and MVA ($p = .014$). Compared to no prior RT or CRT, the probability of EL success was 29% higher with prior RT and 29% lower with prior CRT in MVA, although these associations did not reach significance. CONCLUSIONS: In this retrospective review, EL success correlated with high social support, post-TL full-oral diet, and pre-operative treatment history. These results warrant validation in a larger prospective study to help guide the choice of voice rehabilitation modalities or intensified speech therapy. LEVEL OF EVIDENCE: 4.