

How to manage periprosthetic leakage

Parrilla C, Longobardi Y, Galli J, Rigante M, Paludetti G, Bussu F, Scarano E. Periprosthetic Leakage in Tracheoesophageal Prosthesis: Proposal of a Standardized Therapeutic Algorithm. *Otolaryngol Head Neck Surg.* 2021 Jan 5:194599820983343. doi: 10.1177/0194599820983343. Online ahead of print. PMID: 33400627

Tracheoesophageal puncture (TEP) is the gold standard for voice rehabilitation after total laryngectomy, due to its high success rate (60-95%) and superior voice quality. Periprosthetic leakage is recognized as a demanding long-term complication. The aim of this article is to discuss the various causes of periprosthetic leakage and to propose a systematic management algorithm. In a retrospective study, including 115 patients between 2014-2019, the various causes are demonstrated, and the systematic and standardized algorithm that was followed for management was evaluated. Periprosthetic leakage was reported in 24.01% of 1374 consultations, with too long prosthesis (35.15%), enlarged TEP (31.51%) and granulation/dislocation (31.22%) as the most common causes. The periprosthetic leakage was managed with a step by step procedure, following a therapeutic algorithm which is presented in the article. The procedure starts with deep cleaning (consisting of removal of any crusts/secretions behind the tracheal flange) and prosthesis reallocation in situ (when the

prosthesis is partially embedded) with a success rate of 19.32%. If unsuccessful, this is then followed by several treatment options, such as downsizing the voice prosthesis, placement of a tracheal washer (XtraFlange) or voice prosthesis with additional enlarged esophageal flange (XtraSeal) or injection of fillers. In 2 cases (1.7%) puncture closure was indicated, the last step of the algorithm. The authors concluded that this standardized approach reduced the costs and burden for the clinicians as well as the patients.



Radiological characteristics of voice prostheses

Pun A, Albarki H, Levy S, Charles Giddings C. Radiologic characteristics of voice prostheses and the clinical significance of the missing valve. *Aust J Otolaryngol* 2020;3:4

Though very rare, one of the complications following tracheoesophageal puncture is aspiration of the voice prosthesis (VP). In this in-vitro imaging study a dislodged VP was simulated in an imaging phantom. The use of Chest X-Ray (CXT) and computed tomography (CT) in different settings was investigated. The aim was to enable distinct imaging characteristics of 6 commonly used VPs, and to

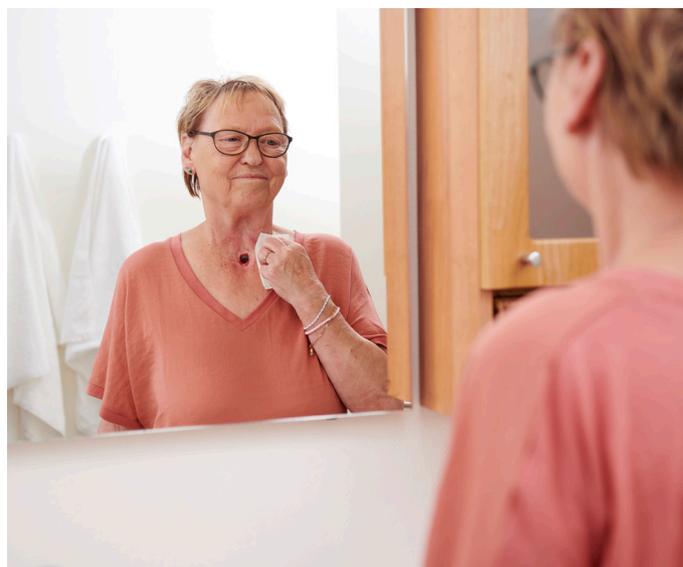
make recommendations regarding an optimal radiographic protocol. All VPs were easily detected with CXT, but the best visualization was with a standard dose CT with iterative reconstruction (IR). It is therefore recommended to start with CXT to detect a missing VP, followed by a CT with IR if needed. An identified VP should be retrieved by bronchoscopy.

Outcomes of total laryngectomy

Bozec A, Culié D, Poissonnet G, Dassonville O. Current Role of Total Laryngectomy in the Era of Organ Preservation. *Cancers (Basel)*. 2020 Mar 3;12(3):584. doi: 10.3390/cancers12030584

In this review article, the role of total laryngectomy is discussed in the era of larynx preservation. Until 1990 total laryngectomy (TL) was the standard treatment for advanced laryngeal cancer (LC). Since the publication of the RTOG 91-11 trial in 2003, several larynx preservation protocols (LP) have been developed. Today, over two-thirds of the patients are treated according LPs, and preserve a functional larynx. At the same time, several studies reported that the overall survival for advanced LC did not improve in the last decades. The results of these studies indicate that primary TL is the preferred treatment option for T4a LC, especially when thyroid cartilage invasion is involved. Furthermore, poor laryngeal function before LC treatment, such as airway obstruction and dysphagia, are indicated as a contraindication for LP, also for T3 LC. For recurrent LC after failure of LP, TL is the standard treatment. Intensive

functional rehabilitation and a personalized treatment program by a multidisciplinary team are recommended to improve quality of life and psychosocial well-being for laryngectomized patients.



Bertolin A, Lionello M, Zanotti C, Franz L, Giacomelli L, Rizzotto G, Marioni G. Oncological and Functional Outcomes of Primary and Salvage Total Laryngectomy. *Laryngoscope*. 2021 Feb;131(2):E569-E575. doi: 10.1002/lary.28955. Epub 2020 Aug 8.

In this retrospective cohort study, the oncological, functional and postoperative outcomes of total laryngectomy (TL) were analyzed, comparing primary TL (n=101) with salvage TL after failure of conservative surgery (n=38) or organ preservation treatment protocols (n=75). A recurrence occurred in 24% of the primary TL patients, compared to 44% in the salvage TL group. Besides this significant lower recurrence rate, the primary TL patients showed a significantly longer overall and disease free survival. Furthermore, significantly better

functional outcomes and fewer postoperative complications were reported for the primary TL group, such as shorter hospital stay, less postoperative pharyngocutaneous fistulae, better voice quality and less voice prosthesis-related complications. The authors conclude the oncological and functional outcomes after primary TL are significantly better compared to salvage TL. Within the salvage TL group the results were better after failure of initial conservative surgery than after failure of organ preservation treatment.

Long-term impact of jaw opening exercises for trismus post-radiotherapy

Karlsson O, Karlsson T, Pauli N, Andréll P, Finizia C. Jaw exercise therapy for the treatment of trismus in head and neck Cancer: a prospective three-year follow-up study. *Support Care Cancer*. 2020 Nov 24. doi: 10.1007/s00520-020-05517-7. Online ahead of print.

Trismus is a common complication after head and neck cancer treatment. Structured exercise intervention with jaw mobilizing devices has shown to improve Maximum Interincisal Opening (MIO), reduce trismus related symptoms and improve quality of life. The aim of this study was to investigate long-term effects of jaw exercise therapy. Patients were included between 2007 and 2012, and data was collected pre- and post-intervention and at 3 year post-intervention. Patients (n=50) in the intervention group performed jaw exercises during 10 weeks, starting 3 to 6 months post-radiotherapy. At the 3-year follow-up 87% of the intervention group had no trismus (MIO>35mm). Furthermore, the intervention group showed a significantly improved mean MIO, less trismus-related symptoms (Gothenburg trismus questionnaire) and an improved health related quality of life (EORTC QLQ). The findings indicate that jaw exercises are effective up to 3 years post-intervention.

It is recommended to start jaw exercise therapy early and to continue long term to maximize the results.



Laryngectomy and constipation

Sirin G & Sirin S. Functional constipation as a neglected condition in laryngectomized patients. *Turk J Gastroenterol*. 2020 Feb;31(2):120-127. doi: 10.5152/tjg.2020.19887

Constipation is an underexposed problem in laryngectomized patients. Dietary changes, loss of mobility, medications, anxiety and depression are mentioned as factors contributing to this issue. With this study the authors aim to assess differences between surgical or laryngeal preservation treatment. The relationship between the loss of the glottic closure and the possible associated factors in the development of constipation are also investigated. Between 2015 and 2019, 55 patients without pre-treatment presence of constipation were included, of which 30 underwent total laryngectomy (TL) and 25

chemoradiotherapy (CRT). The presence of constipation was assessed in the 3rd and in the 6th month after treatment. Patients treated with TL showed a significant higher frequency of constipation. The loss of glottic closure was the most important factor, especially in the early postoperative period. Patients diagnosed with constipation 3 months post-treatment were provided with dietary and lifestyle change recommendations, and closing the tracheostoma during defecation was recommended. At 6 months post-treatment the constipation incidence decreased in the TL group, but increased in the CRT group.

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