

Endoscopic-assisted approach to extremely distal tracheal margin in laryngectomy: an alternative to mediastinal tracheostomy

Rachel Wu, Gerard Sexton, Con Timon, John Kinsella, Conall Fitzgerald, Paul Lennon

Department of Otorhinolaryngology/Head, Neck Surgery, St James Hospital, Dublin

Background:

Subglottic and tracheal extension of disease can present a unique challenge to margin control and en bloc resection during total laryngectomy. Mediastinal tracheostomy to address this is associated with significant morbidity.

Methods:

A technique is used to mitigate the need for mediastinal tracheostomy during total laryngectomy and is described via a video case series of 4 patients. Following pharyngeal incision and exposure of the larynx, the patient is pre-oxygenated and the endotracheal tube is removed. A zero-degree rigid endoscope is passed via the glottis into the subglottis. A large-bore needle inserted via the anterior tracheal wall under direct endoscopic visualisation is sequentially placed more distally until located at an acceptable distance from visible disease. Tracheal incision is made at the level of the needle.

Results:

The technique has been used for 4 patients by 2 different surgeons. Rationale for use of technique included extensive subglottic disease, requirement for extended tracheal resection due to submucosal extension, and posterior tracheal wall involvement from hypopharyngeal disease. Clear distal margins were achieved in all cases.

Conclusion:

This technique makes use of readily available technology and safely delineates distal tracheal margin during laryngectomy in a time-efficient manner.