Effect of Unilateral Cordotomy on Perception of Dysphagia
Melissa Conklin, BS1, Matthew S. Clary, MD2, Elizabeth M. Cuadrado, MS2, and Marie E. Jetté, PhD2

Introduction
- Transverse CO2 Laser Cordotomy is one of the most common treatments for bilateral vocal fold immobility.
- Bilateral vocal fold immobility most commonly presents with dyspnea and airway restriction, which can be life-threatening.
- While it is known that cordotomy impairs voice quality10, it is widely believed that cordotomy has the potential to cause swallowing dysfunction by creating glottal incompetence, placing patients at risk for aspiration events.

Hypothesis
Patient perception of swallowing would not change.

Purpose
Evaluate effect of unilateral cordotomy on the perception of dysphagia to better understand the influence of glottic function and its role in dysphagia

Materials and methods
- Retrospective review
- 15 patients across 20 surgeries were included.
  - Inclusion Criteria:
    - Diagnosis of bilateral vocal fold immobility treated with unilateral CO2 laser cordotomy
    - Complete pre- and post-operative EAT-10 questionnaires
- Patients provided EAT-10 questionnaires at their initial visit and all follow-up visits
  - EAT-10 scores were summed and recorded for analysis
- Primary Outcome of Interest: Post-operative change in EAT-10 score

Results
- Of the 20 surgeries, 10 were primary unilateral cordotomies and 10 were revision cordotomies.
- Post-operative EAT-10 changes:
  - Increase in EAT-10 score for 9 procedures
  - Decrease in EAT-10 score for 6 procedures
  - No change in EAT-10 score for 5 procedures
- Pre- and Post-Operative EAT-10 scores:
  - Median EAT-10 Pre-operatively:
    - Primary Only: 4.5
    - Revision Only: 2.5
    - Primary and Revision: 3.5
  - Median EAT-10 Post-operatively:
    - Primary Only: 1
    - Revision Only: 2
  - Median difference in EAT-10 scores:
    - 0
    - p = 0.73
    - 0
    - p = 0.75
    - 0
    - p = 0.91
  - To better understand the components of the EAT-10 that may have contributed to variability in patient perception of dysphagia, we examined individual EAT-10 items (Figure I)
    - No clear trend based on individual findings

Conclusions
- In this study, there was no change in patient perception of dysphagia following unilateral cordotomy for bilateral vocal fold immobility.
- This suggests that unlike vocal impairment, swallowing impairment is not a major consequence of unilateral cordotomy despite reduced glottal competence.
- Glottal closure is only one of many mechanisms employed by the larynx during swallowing and it’s likely that additional mechanisms of protection compensate for the glottic insufficiency created by unilateral cordotomy.
- Unilateral cordotomy is safe, effective, and reliable treatment for bilateral vocal fold immobility.

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Literature cited

Further information
1 School of Medicine, University of Colorado, Aurora, CO, USA
2 Department of Otolaryngology, School of Medicine, University of Colorado, Aurora, CO, USA