11 - Title: Factors Contributing to Laryngoplasty Revision: Insights from the TriNetX Database

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Background:
Medialization laryngoplasty (ML) is a laryngeal framework surgery which corrects glottic insufficiency. Prior studies report revision rates of ML ranging from 3-36%, but factors influencing the need for revision have not been evaluated. Objectives of this study were to determine the revision rate of ML and identify patient factors associated with revision.

Methods/Research Design.
Retrospective cohort study. Patients undergoing unilateral ML (CPT 31591) were identified in TriNetX, a global collaborative network with data from over 128 million patients. Revision rate was determined by the percentage of patients undergoing a second ML at least 30 days after initial procedure. Patient factors (demographics, surgical history, comorbidities) were compared between groups.

Results (or Preliminary Results, as applicable for a project in progress):
4,029 patients underwent medialization laryngoplasty. 323 (8.02%) patients underwent repeat ML. Patients undergoing revision were older at initial surgery compared to those not requiring revision (63.6 years vs. 61.4 years, p=0.02). Comorbidities associated with revision include pulmonary diseases (asthma, chronic obstructive pulmonary disease exacerbation, pulmonary fibrosis, bronchiectasis), neurological conditions (cerebrovascular disease, Alzheimer's disease), and mental health disorders (depression, schizophrenia). History of thyroidectomy or tracheostomy were associated with revision. Gender, race, ethnicity, geographic region, tobacco use, bronchiectasis, emphysema, Parkinson's disease, and amyotrophic lateral sclerosis were not associated with the need for revision ML.

Conclusion (or Preliminary Conclusion, as applicable for a project in progress):
This is the first comprehensive analysis of factors associated with revision laryngoplasty using the TriNetX database. Certain demographic and patient factors may influence the likelihood of requiring revision ML, potentially impacting patient selection and providing a basis for individualized patient counseling.