Reduction Laryngoplasty: A Safe and Effective Option for Treating Over-Augmentation

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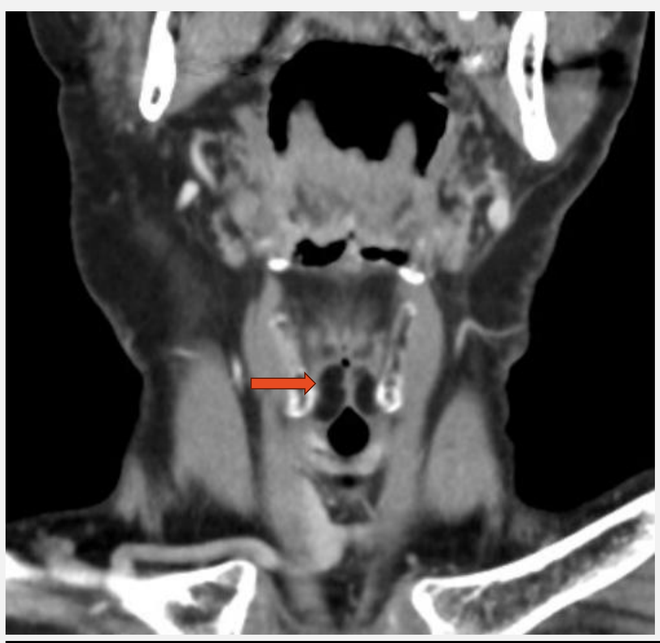
Key Takeaway:

Over-augmentation of the vocal folds can cause severe dysphonia. Surgical resection of excess augmentation material is a viable treatment strategy.



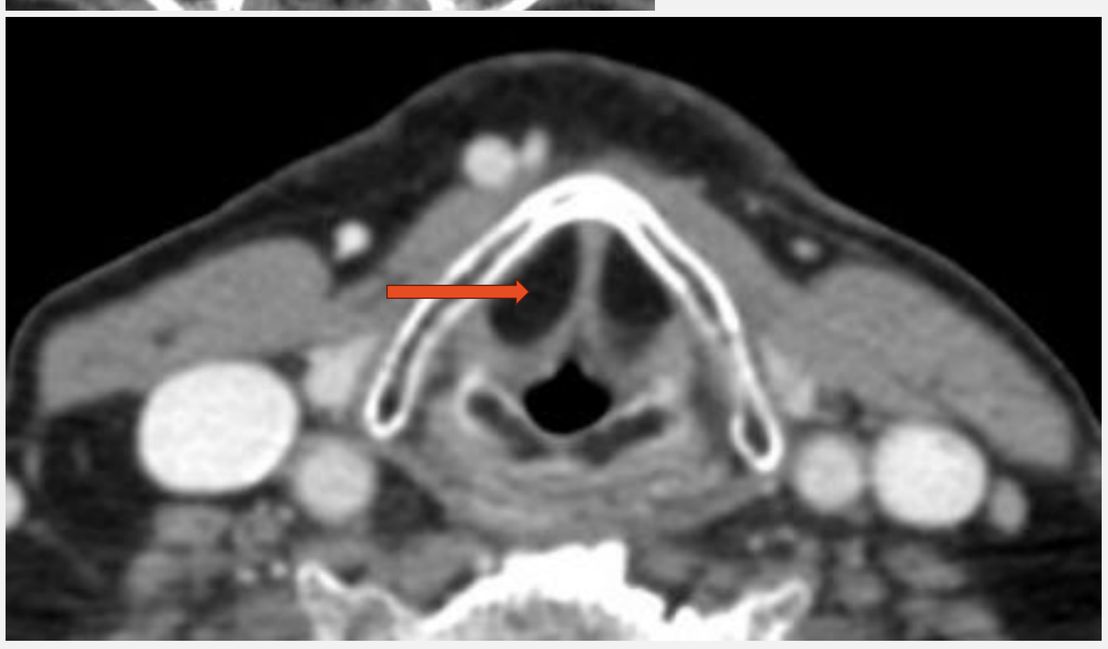


Figure 1. CT images from the preoperative workup. Note the fat marked by red arrows

Introduction

Injection laryngoplasty is often the initial intervention for a lateralized true vocal fold (TVF). Autologous lipoaugmentation has been used as a longer lasting injectate. The objective of this study was to evaluate the safety and efficacy in treating a case with continued over-augmentation.

Case

An 86-year-old male presented with severe dysphonia due to continued over-augmentation status post lipoaugmentation four years prior. The patient self-rated his voice as a 1/10 with one the worst possible voice and scored 32/40 on the Voice Handicap Index-10 (VHI-10). A computed tomography scan showed right greater than left fat deposits. Stroboscopy showed supraglottic hyperfunction and right true vocal fold (TVF) convexity. In the operating room, a carbon dioxide (CO2) laser was used to expose the fat via a lateral cordotomy approach. A biopsy confirmed that it was adipose tissue. The laser was used to ablate fat until the TVF returned to a more natural position.

Results

Stroboscopy showed granulation on the lateral-superior surface of the right TVF at six weeks, which was treated with inhaled steroid and resolved by the 12-week visit. At the 12-week visit the patient rated his voice as a 7/10 and scored 1/40 on the VHI-10. Postoperatively, the patient had no signs or symptoms of aspiration, pneumonia, dyspnea or dysphagia.

Conclusion

A patient suffering from dysphonia due to continued over-augmentation was safely and effectively treated with reduction laryngoplasty.

Self rating of voice, 10 being best voice possible	1/10
Self rating of talkativeness, 10 being the most talkative	1/10
Voice Handicap Index-10	32/40

Figure 2. Preoperative voice measures

Self rating of voice, 10 being best voice possible	7/10
Self rating of talkativeness, 10 being the most talkative	7/10
Voice Handicap Index-10	1/40

Figure 3. Postoperative voice measures

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Surgical Pathology Report

Patient: [redacted] Specimen #: BAS23-3142
DOD ID:: [redacted] Encounter #: 51828461 Taken: 2/23/2023 13:30
DOB/Age: [redacted] (Age: 82) Received: 2/24/2023 10:47
Physician(s): ALAN D TATE Reported: 2/27/2023

Specimen(s) Received
Taken Rec
A) Permanent- Right True Vocal Fold Adipose 2/23/2023 13:30 2/24/2023 10:47

Final Diagnosis
Vocal Cord, Right True Vocal Fold, Biopsy:
- Minute fragment of fibroadipose tissue with no significant pathologic abnormality.

Figure 4. Pathology report

Acknowledgements

The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of San Antonio Military Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, the Department of the Air Force, Department of Defense, or the U.S. Government.

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