

Gradual interval release of a unilateral suture lateralization: a novel method of managing inducible laryngeal obstruction.

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Introduction

Inducible laryngeal obstruction (ILO) is a laryngeal condition characterised by abnormal adduction of the vocal cords during respiration. We present a novel approach of performing a unilateral suture lateralisation with a gradual, interval release of tension in managing refractory ILO.

Case

A 16-year-old female presented to a laryngologist with refractory ILO. Flexible nasendoscopy revealed severe abnormal bilateral true vocal cord adduction on inspiration, with mild erythema along the edges of the true vocal fold edges. She was able to induce appropriate vocal fold motion with sniff and pursed lip manoeuvres, but this was not sustained. There was no other upper aerodigestive tract pathology and no vocal cord paresis/paralysis observed. She was generally well; however, she has had some mild anxiety (managed with some counselling) and an appendicectomy, from which she had no acute or residual voice/airway changes from intubation. She was not on any regular medications. She was otherwise a generally happy adolescent, well-adjusted to secondary schooling with supportive parents, was not subjected to bullying, and had no progress or behavioural concerns.

Despite laryngeal retraining, unilateral and subsequently bilateral Botox injections, her symptoms did not resolve. After a prolonged discussion, she underwent a right vocal cord suture lateralisation under general anaesthetic (Figure 1). The right vocal cord was lateralised with 2-0 non-absorbable monofilament over an external metallic button (Figure 2). Between the skin and the button were three layers of 0.4mm silastic sheets. Every month, one sheet of silastic was removed and this slightly reduced some tension in the vocal cord, allowing slightly more movement.

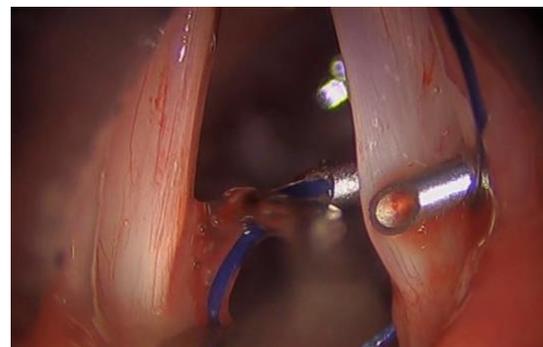


Figure 1. Intraoperative picture of right vocal cord suture lateralisation



Figure 2. External metallic button for suture lateralisation with 3x silastic sheets creating tension

Discussion

ILO, otherwise known as vocal cord dysfunction (VCD) is a notoriously poorly understood condition. Management of ILO varies, but commonly includes speech therapy (psychotherapy or laryngeal retraining) first-line, Botulinum toxin (Botox) injections to the affected vocal folds second-line, and a surgical supraglottoplasty as a last resort. There are only two other documented cases of suture lateralisation for VCD, both of which were in patients with long term tracheostomies who failed decannulation due to paradoxical adduction during inspiration.

Conclusion

In patients with inducible laryngeal obstruction who are refractory to laryngeal retraining exercises and Botox injections, suture lateralisation with gradual release of tension can be trialled as an alternative management option.

References

1. Denipah N, Dominguez CM, Kraai EP, Kraai TL, Leos P, Braude D. Acute Management of Paradoxical Vocal Fold Motion (Vocal Cord Dysfunction). *Ann Emerg Med*. 2017;69(1):18-23. doi:10.1016/j.annemergmed.2016.06.045
2. Van Griethuysen, J., Al Yaghchi, C., & Sandhu, G. (2012). Use of bilateral suture lateralisation technique in severe paradoxical vocal fold movement, allowing removal of long-term tracheostomy: Case report. *The Journal of Laryngology & Otology*, 126(3), 328-330. doi:10.1017/S0022215111003318
3. Young O, Russell JR. Suture lateralization of vocal cord treating paradoxical vocal cord movement: a case report. *Eur Arch Otorhinolaryngol*. 2008;265(4):485-487. doi:10.1007/s00405-007-0472-0

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