



Phonotraumatic Vocal Fold Lesions

Introduction

Benign vocal fold lesions, particularly in the mid membranous portion of the vocal folds and arising in the setting of significant or prolonged voice use, are sometimes termed phonotraumatic in nature. The terms voice “abuse,” “misuse,” or “overuse” have been utilized in the past, but are often avoided now due to their negative connotation and potential negative impact on treatment outcomes.

Gillespie, A.I. and K.V. Abbott, *The influence of clinical terminology on self-efficacy for voice*. Logoped Phoniatr Vocotr, 2011. 36(3): p. 91-9.

Technology or Method

Multidisciplinary approach including evaluation by both a laryngologist and speech language pathologist (ideally, simultaneously) to optimize the patient’s assessment and development of the best treatment plan is encouraged and has been shown to improve outcomes, including patients’ adherence to voice therapy.

Specific questions about duration of voice use, type of environment (e.g. loud background noise, significant smoke), type of voice use (e.g. prolonged or loud), presence of irritants (e.g. dust, smoke), and hydration status may be particularly helpful in patients with suspected phonotraumatic lesions.

Collecting and serially tracking quality of life measures over time helps clinicians understand the impact of the voice symptoms on the patient’s ability to function and allows monitoring of response to treatment over time as well. Currently several validated, voice-specific questionnaires are available including the Voice Handicap Index (VHI), its shorter version the Voice Handicap Index-10 (VHI-10), and Voice Related Quality of Life (VR-QOL).

Starmer, H.M., et al., Attendance in voice therapy: can an interdisciplinary care model have an impact? *Ann Otol Rhinol Laryngol*, 2014. 123(2): p. 117-23.

Litts, JK, et al., Impact of combined laryngologist and speech-language pathologist co-assessment on treatment outcomes and billing revenue. *Laryngoscope*, *Laryngoscope*. 2015 Sep;125(9):2139-42.

Interpretation or Pertinent Findings

Stroboscopy (via either flexible or rigid endoscopy) is the cornerstone of evaluation of dysphonia and identification of vocal fold lesions. The superior magnification of rigid stroboscopy may be particularly beneficial when assessing vocal fold lesion(s). The gross appearance of these lesions may be quite variable: large or small, symmetric or asymmetric, unilateral or bilateral, translucent or opaque, stiff or supple, or broad- or narrow-based. Stroboscopy is a critical tool to describe the characteristics of vibration of these lesions accurately.

The nomenclature used to describe these lesions has varied in the past. In an attempt to create a standardized system to facilitate communication as well as research, Rosen et al described



specific characteristics of nine categories of benign vocal fold lesions: vocal fold nodules, fibrous mass (subepithelial or ligamentous), cyst (again, subepithelial or ligamentous), polyp, pseudocyst, reactive lesion, and non-specific vocal fold lesion. A 2016 follow-up study showed that voice outcomes were directly related to the type of lesion present, with deeper lesions having worse voice outcomes.

Auditory-perceptual evaluation and acoustic and aerodynamic measures (assessed by the speech-language pathologist) can provide additional, helpful information to guide treatment decision-making.

Treatment should include optimization of any aggravating factors (e.g. tobacco use, dehydration, high vocal demands, allergic disease, or reflux), evaluation for candidacy for voice therapy (termed *stimulability*) as assessed by a voice specialized speech-language pathologist, and/or consideration for appropriateness for surgical intervention. In many cases, multiple interventions may be required. Appropriately selected treatment is often successful in improving patients' voice symptoms, functionality, and quality of life.

References

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Akbulut, S., et al., Voice outcomes following treatment of benign midmembranous vocal fold lesions using a nomenclature paradigm. *Laryngoscope*, 2016. 126(2): p. 415-20.

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