Commentary on “Effects of Cough Suppression Therapy on Voice Disorder Severity”

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Abstract
Cough Suppression Therapy (CST) is a unique type of voice therapy provided by a Speech Language Pathologist (SLP) that addresses behavioral modifications to manage chronic refractory cough.

Keywords: Chronic refractory cough; Cough suppression therapy

List of abbreviations
CST: Cough Suppression Therapy
CRC: Chronic Refractory Cough

Background
Chronic cough, defined as cough that persists more than 8 weeks despite medical treatment can be multifactorial, sometimes secondary to pulmonary or extrapulmonary conditions or due to cough hypersensitivity [1]. Persistent chronic cough known as Chronic Refractory Cough (CRC) lacks resolution despite standard medical intervention. By relaxing the muscles of the vocal folds, Cough Suppression Therapy (CST) may decrease vagal nerve hypersensitivity and overstimulation of cough receptors. Additionally, CST may improve voice disorders caused by vagal neuropathy. In LaTour et al., a retrospective study of 43 patients concluded that CST improves subjective cough and voice disorder severity in patients with moderate-to-severe voice disorders refractory to traditional medication [2].

Exploring Voice Disorders as a Predictor for Success of CST for CRC

Although patients with less severe voice disorders as defined by a Voice Handicap Index (VHI) < 11 (cough group) only endorsed significant improvement of their cough, patients with more severe voice disorders and a VHI ≥ 11 (cough-voice group) experienced significant improvement in both their cough and voice disorder [2]. As acknowledged in the discussion, the lack of significant voice improvement in the cough group is not surprising since patients with fewer voice symptoms reported a baseline VHI-10 so close to zero (mean = 2.5) and may have become more aware of their voice disorder, leading to perceived worsening of voice symptoms [2].

While both cough and cough-voice groups reported significant improvement in cough, CST had a greater effect size in the cough-voice group than the cough group (0.62 vs 0.42) [2]. Patients seeking treatment for CRC often underestimate their voice disorder [3]. Given the dual impact of CST for patients in the cough-voice group, assessing a patient’s vocal function may provide more insight into the success of CST. Voice disorders and chronic cough share a common pathway so patients with more severe voice disorders may have been more likely to have a neurological etiology of their symptoms that CST was better able to improve compared to those with less severe voice disorders [4,5]. LaTour et al did not control for the type of voice disorder or type of medical management prior to CST and future studies may provide more insight into the scope of CST as treatment for CRC [2].

Conclusion
CST should be offered to patients with CRC as it can help decrease the personal and social burden of chronic cough. Perceived improvement of VHI-10 and cough in patients with moderate to severe concomitant voice disorders support the use of CST as treatment for CRC, and future studies may provide further understanding of the relationship between CST and voice improvement.

Declarations
The need for ethics approval was waived given no human participants.
We consent to publication.
Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.
The authors declare that they have no competing interests.
This commentary did not require any sources of funding.

AS was a major contributor in writing the manuscript. DL and TM reviewed and edited the manuscript. All authors read and approved the final manuscript.

References
