INTRODUCTION

Objectives:
This study aimed to add to the body of evidence for efficacy of Superior Laryngeal Nerve (SLN) blocks for treatment of neurogenic cough. Efficacy at short- and long-term intervals are presented as well as relationships with laryngoscopic findings.

Methods:
A retrospective chart review of patients treated with SLN block between 2018-2020 was conducted. Patient demographics, videostroboscopic findings and patient subjective perception of outcomes were recorded and analyzed. Cough Severity Index (CSI) scores from pre-injection, short-term follow up, and long-term follow up were compared.

Results:
Twenty patients underwent SLN block in the clinic setting. Four patients were excluded for incomplete records. The indication was neurogenic cough refractory to medical management and/or cough suppression therapy. Patients with short-term follow up (n=13) had statistically significant decrease in CSI scores, with a mean baseline CSI of 24.3 decreasing to 16.15 (P = 0.006). Patients with evidence of Vocal Fold Motion/Vibratory Abnormalities (VFA) (n=8) showed improvement in short term CSI scores, with a mean baseline CSI of 24.13 decreasing to 14.5 (P = 0.004). Those without evidence of VFA did not have statistically significant improvement in short term CSI scores. At long-term follow up, patients with VFA had improvements that approached statistical significance with a mean baseline CSI of 22.56 decreasing to 14.56 (P = 0.057), while patients without VFA showed no improvement.

Conclusions:
Our results are consistent with previous literature indicating efficacy of SLN block. The presence of VFA may be an indicator of patients who experience increased therapeutic effect.

METHODS AND MATERIALS

Medical Records of patients who underwent in-office superior laryngeal nerve block were reviewed to compare Cough Severity Index (CSI) scores. Complete data sets were further stratified into those with vocal fold motion irregularities and those without. Approval was granted by the Colorado Multiple Institutional Review Board.

Inclusion Criteria
- Individuals with a diagnosis of refractory chronic cough
- Age 18-89 at the time of treatment
- Underwent a Superior Laryngeal Nerve Block on or after January 1, 2017
- Patients had at least three CSI scores documented

Exclusion Criteria
- Patients with incomplete cough severity index data (missing baseline or follow up scores)

Timeframe Stratification:
- Short Term Follow Up defined as less than 50 days
- Long Term Follow Up defined as greater than 100 days

Vocal Fold Anomaly Stratification:
- Laryngoscopy procedure notes that predated first SLN block were evaluated for vocal fold anomalies
- One patient did not have a documented laryngoscopy and was excluded from stratification
- Structural lesions (nodules etc.) were not considered

Statistical Analysis
- Parametric values for all groups and subgroups were calculated using paired student t-tests.
- Error bars in figures represent standard error of data sets.

FIGURES

RESULTS

CONCLUSIONS

- SLN block appears to have more efficacy in patients with underlying vocal fold motion abnormalities
- Superior laryngeal nerve block displays significant long-term efficacy, but has limited long-term efficacy

REFERENCES