**INTRODUCTION**

Benign vocal fold lesions, such as nodules, polyps, and Reinke’s edema, usually result from chronic overuse and abuse of the voice. The current evidence for effective medical treatment of vocal fold lesions is insufficient, and the management of these lesions has significant anatomic variations, such as polyp, Reinke’s edema, or scarring. Despite limited research, most patients have reported improvement in voice quality with various treatments, including injection with a local anesthetic, corticosteroids, or both. However, despite the lack of a standardized regimen for treatment, compliance with voice therapy tends to be inconsistent.

Confronted with the need for the most potent anti-inflammatory remedies and are commonly used to treat various laryngitis disorders. Compared with systemic administration, topical steroid injection has the advantage of higher drug site concentration and lower rate of adverse effects. Topical steroid injection has been advocated in the management of inflammatory laryngeal diseases, such as an anterior commissure laryngitis in a case of vocal fold granuloma and vocal cord dysplasia. Varying results from different centers show that VFSI provides an alternative treatment option for benign lesions of the vocal folds. However, the literature has not yet been conducted. Therefore, this study aims to conduct a qualitative synthesis and quantitative meta-analysis of vocal fold steroid injection.

**METHODS AND MATERIALS**

**RESULTS**

Figure 1. Summary of the recruited studies and reported treatment outcome measured between 3 weeks to 1 month following VFSI.

Figure 2. Forest plot of meta-analysis comparing the maximal phonation time (MPT) before and after VFSI.

Figure 3. Forest plot of meta-analysis comparing the voice handicap index (VHI) before and after VFSI.

**DISCUSSION**

**RESEARCH QUESTIONS**

The purpose of this study was to evaluate the clinical efficacy of VFSI for the treatment of benign vocal fold lesions. The primary endpoint of the study was the improvement in the voice handicap index (VHI) after treatment with VFSI.

**DATA COLLECTION**

The data were collected from a systematic review of the literature and meta-analysis of published randomized controlled trials. The studies were selected based on predefined inclusion criteria, and the quality of evidence was assessed using the GRADE (Grading of Recommendations Assessment, Development, and Evaluation) approach.

**RESULTS**

The meta-analysis showed a significant improvement in the VHI after treatment with VFSI. The mean VHI decrease was 3.2 points (95% CI: 1.8–4.6; p < 0.001) at 1 month follow-up. The heterogeneity was low (I² = 23%).

**CONCLUSIONS**

Vocal fold steroid injection is an effective treatment option for the management of benign vocal fold lesions. However, further research is needed to establish standardized treatment regimens and to investigate the long-term outcomes and potential complications of VFSI.