Glossopharyngeal Nerve Palsy Following Tonsillectomy: An Unusual Complication & Its Potential Treatment

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Educational Objectives

• Understand the clinical presentation and examination findings in a patient with post-tonsillectomy glossopharyngeal nerve palsy
• Discuss the impact of the McNeill Dysphagia Therapy Program (MDTP) in treating severe dysphagia secondary to post-tonsillectomy glossopharyngeal nerve palsy

Introduction

• The glossopharyngeal nerve lies in close proximity to the tonsillar fossa making it susceptible to injury during tonsillectomy, though it is uncommonly injured in practice.
• This poster highlights a rare case of severe dysphagia due to glossopharyngeal nerve palsy following tonsillectomy and demonstrates the potential benefit of an aggressive exercise-based rehabilitation program for improving swallowing.

Case Description

A 37-year-old female presents one-and-a-half months after routine tonsillectomy with persistent dysphagia, significant weight loss, bilateral otalgia, and ear itching.

Past Medical History:
• Cardiomyopathy
• GERD

Physical Exam (including laryngoscopy):
• Pooled vallecular and hypopharyngeal secretions
• Decreased palatal elevation
• Decreased gag sensation
• Hypernasality
• Functional Oral Intake Score (FOIS) of 4/7

Videofluoroscopic swallow study (VFSS) on POD 71 (Figure 1):

- Posterior tongue weakness
- Persistent vallecular residue
- Aspiration

Other concerns:
- Phagophobia
- Multiple personal stressors

Treatment:
• McNeill Dysphagia Therapy Program (MDTP)1,2
• Cognitive behavioral therapy (CBT)
• Nutritional supplementation & PPI

Response:
• FOIS = 6/7 within three weeks of initiating MDTP
• Patient regressed significantly after electing to discontinue MDTP early, but upon resumption of above treatments she advanced to a full, unrestricted diet, FOIS = 7/7

VFSS on POD 334 (Figure 2):
• Significantly improved dysphagia
• Less pharyngeal residue
• No aspiration

Significant improvement in overall physiology as scored by the Modified Barium Swallowing Impairment Scale (MBSImp) (see Table 1)

Discussion

McNeill Dysphagia Therapy Program (MDTP)

• Exercise science-based framework for re-training the sensorimotor neuromuscular activities of swallowing using increasingly resistive forces and variations in movement velocity.1,2
• Superior clinical and functional outcomes have been shown in patients with dysphagia using MDTP therapy compared to traditional swallowing therapy.3

Cognitive Behavioral Therapy applied to Dysphagia

• Counseling and systematic stimulus exposure to help normalize sensory dysfunction are critical in conquering phagophobia
• Education regarding the interaction between psychological stressors, oral and pharyngeal swallowing physiology, and GERD/LPR is important for patient understanding and satisfaction

Other Factors to Consider

• Clinician support through routine outpatient visits and 24-hour phone availability aids in adherence to MDTP and swallowing rehabilitation.
• Some improvement noted with anti-reflux precautions and medication.

Our patient

• FOIS increased from 4 to 6 within three weeks of initiating therapy
• Regression due to non-compliance and fear
• By the end of therapy, patient had improved to near normal oral and pharyngeal swallowing

Conclusions

Glossopharyngeal nerve palsy should be suspected in post-tonsillectomy patients with persistent dysphagia. MDTP appears to be an effective method for alleviating dysphagia. Our patient showed a marked improvement in VFSS findings, FOIS, and objective MBSImp measures with this program. Cognitive behavioral therapy may help in cases of phagophobia, and clinician support and routine follow-up are important adjuncts to achieving success.

Table 1: MBS Impairment Scale (MBSImp)3

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<th>Table 1: MBS Impairment Scale (MBSImp)3</th>
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<tr>
<td>Oral Phase</td>
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<td>Baseline (POD 71)</td>
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<td>Final (POD 334)</td>
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Note: Oral phase scores range from 0 to 22 and pharyngeal phase scores range from 0 to 29, with higher scores correlating with more severe impairment.

References


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