



ORIGINAL ARTICLE

## Trans-oral endoscopic partial adenoidectomy does not worsen the speech after cleft palate repair<sup>☆</sup>



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### KEYWORDS

Endoscopic  
adenoidectomy;  
Cleft palate;  
Adenoid hypertrophy;  
Velopharyngeal  
insufficiency

### Abstract

**Introduction:** Adenoid hypertrophy may play a role in velopharyngeal closure especially in patients with palatal abnormality; adenoidectomy may lead to velopharyngeal insufficiency and hyper nasal speech. Patients with cleft palate even after repair should not undergo adenoidectomy unless absolutely needed, and in such situations, conservative or partial adenoidectomy is performed to avoid the occurrence of velopharyngeal insufficiency. Trans-oral endoscopic adenoidectomy enables the surgeon to inspect the velopharyngeal valve during the procedure.

**Objective:** The aim of this study was to assess the effect of transoral endoscopic partial adenoidectomy on the speech of children with repaired cleft palate.

**Methods:** Twenty children with repaired cleft palate underwent transoral endoscopic partial adenoidectomy to relieve their airway obstruction. The procedure was completely visualized with the use of a 70° 4mm nasal endoscope; the upper part of the adenoid was removed using adenoid curette and St. Claire Thompson forceps, while the lower part was retained to maintain the velopharyngeal competence. Preoperative and postoperative evaluation of speech was performed, subjectively by auditory perceptual assessment, and objectively by nasometric assessment.

**Results:** Speech was not adversely affected after surgery. The difference between preoperative and postoperative auditory perceptual assessment and nasalance scores for nasal and oral sentences was insignificant ( $p = 0.231, 0.442, 0.118$  respectively).

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**Conclusions:** Transoral endoscopic partial adenoidectomy is a safe method; it does not worsen the speech of repaired cleft palate patients. It enables the surgeon to strictly inspect the velopharyngeal valve during the procedure with better determination of the adenoidal part that may contribute in velopharyngeal closure.

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## PALAVRAS-CHAVE

Adenoidectomia endoscópica;  
Fenda palatina;  
Hipertrofia da adenoide;  
Insuficiência velofaríngea

## Adenoidectomia parcial endoscópica transoral não piora a fala de pacientes com correção cirúrgica de fenda palatina

### Resumo

**Introdução:** A hipertrofia da adenoide pode desempenhar um papel no fechamento velofaríngeo, especialmente em pacientes com anormalidade palatal; a adenoidectomia pode levar à insuficiência velofaríngea e fala hipernasal. Os pacientes com fenda palatina, mesmo após a correção, não devem ser submetidos a adenoidectomia, exceto quando absolutamente necessário e, em tais situações, a forma conservadora ou parcial é realizada para evitar a ocorrência de insuficiência velofaríngea. A adenoidectomia endoscópica transoral permite ao cirurgião inspecionar a válvula velofaríngea durante o procedimento.

**Objetivo:** O objetivo deste estudo foi avaliar o efeito da adenoidectomia parcial endoscópica transoral na fala de crianças submetidas à correção de fenda palatina.

**Método:** Um total de 20 crianças com fenda palatina previamente corrigida, foi submetida a adenoidectomia parcial endoscópica transoral, para desobstrução das vias aéreas. O procedimento foi completamente visualizado com o uso de um endoscópio de 4 mm e ângulo de 70°; a parte superior da adenoide foi removida com uma cureta para adenoide e fórceps St. Claire Thompson, enquanto a parte inferior foi conservada para manter a competência velofaríngea. Avaliações da fala foram realizadas nos períodos pré e pós-operatório, de forma subjetiva pela avaliação perceptivo-auditiva, e objetiva pela avaliação nasométrica.

**Resultados:** A fala não foi prejudicada após a cirurgia. A diferença entre os escores da avaliação perceptivo-auditiva e nasalância para as sentenças nasais e orais nos períodos pré e pós-operatório foi insignificante ( $p=0,231, 0,442, 0,118$ , respectivamente).

**Conclusões:** A adenoidectomia parcial endoscópica transoral é um método seguro, e não piora a fala dos pacientes com fenda palatina operada. Ela permite que o cirurgião inspecione rigorosamente a válvula velofaríngea durante o procedimento, com melhor determinação da parte adenoide que pode contribuir para o fechamento velofaríngeo.

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## Introduction

Adenoid hypertrophy is a common cause of airway obstruction in children; it may lead to mouth breathing, nasal discharge, snoring, sleep apnea, and hyponasal speech. It also contributes to the pathogenesis of rhinosinusitis and recurrent otitis media.<sup>1</sup> However, the adenoid lies in the posterior pharyngeal wall and may act as a pad against the palate facilitating velopharyngeal closure, especially in patients with palatal abnormality. Its presence can compensate for a short or a poorly mobile palate, a condition that may follow cleft palate repair. Following adenoidectomy, compensation is eliminated and velopharyngeal insufficiency (VPI) may result.<sup>2</sup> Therefore, patients with cleft palate – even after repair – should not undergo adenoidectomy unless absolutely necessary, and in such situations conservative or partial adenoidectomy is performed.<sup>3,4</sup>

Patients with adenoid hypertrophy may need partial adenoidectomy if they are prone to develop VPI after the operation. The procedure entails removal of the upper part that obstructs the choanae and preservation of the lower part that assists in velopharyngeal closure.<sup>2,5,6</sup> Several methods for adenoid removal have been previously described in the literature. Adenoid curette guided by an indirect transoral mirror and a headlight is a simple and quick procedure that has already been in use for a long time, but the indirect visualization of the adenoidal tissue may make the surgeon unable to completely clear the choanae, especially if partial removal is the intended procedure.<sup>7</sup> Transnasal endoscopic partial adenoidectomy has been used with the ability to clear the choanae precisely,<sup>6,8</sup> but this method may make the surgeon unable to completely inspect the velopharyngeal valve that is usually hidden by the residual adenoidal tissue left to maintain velopharyngeal competence. The aim

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