Effectiveness of Frenectomies on Pediatric Tongue and Lip Tie Symptoms

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INTRODUCTION

- Lasers have become increasingly popular for soft tissue surgeries, such as frenectomies, in comparison with the traditional blade or scalpel technique. This is because using lasers creates minimal to no bleeding, decrease in post-operative pain, faster healing, less bacteria, and faster operation time.
- A study by Komori et al. says that ankyloglossia is typically discovered very early due to dysphagia, masticatory difficulty, speech disorder, or at a regular checkup. However, not all children that present with tongue ties or high labial frenum attachment receive treatment
- Pransky et al. states that there is a “strong association between ankyloglossia and breastfeeding difficulties, and resolution of these difficulties [can be treated] with a tongue-tie release procedure[4]”. There is also evidence pointing toward labial frenum tie as hindering optimal breastfeeding, however the labial frenum and posterior tongue ties are still considered controversial to some.
- In older children, speech is most affected when patient presents with ankyloglossia.
- According to our null hypothesis, there will be no changes in symptoms.

METHOD

A retrospective chart review of pediatric dental patients at the Community Health Center of Southeast Kansas was conducted between September 2023 and June 2024 to compare the symptoms of tongue and lip tie pre- and post-frenectomy. Pediatric patients less than one year old were considered infants. Questionnaires completed by the caregivers at the initial consult appointment and at the 1-month follow-up appointment after frenectomy were reviewed. The symptoms compared pre- and post-frenectomy included clicking, milk dribbling, gagging/choking when feeding or eating, sleeping in strange positions, and grinding teeth while sleeping. McNemar’s test was used to determine if there was a statistically significant improvement in symptoms.

PURPOSE

The objective of this study was to determine if frenectomies improved the symptoms of tongue and lip tie in pediatric dental patients.

FIGURE (Before and After Photos of a lingual frenectomy)

RESULTS

- 135 pediatric patients underwent 235 frenectomies, 127 (54%) were lingual frenectomies and 108 (46%) were labial frenectomies.
- Caregivers reported an improvement in clicking (55.6%), milk dribbling (67.5%), gagging (65.2%), grinding (33.3%), and sleeping in strange positions (55.6%). Inclusion of questionnaires from caregivers who did not notice symptoms initially but realized an improvement post-frenectomy increased the frequency of improvement to 62.8% for clicking, 71.7% for milk dribbling, 72.9% for gagging, 55.6% for grinding, and 66.7% for sleeping in strange positions.
- Post-frenectomy, there was a statistically significant improvement in the symptoms of clicking, milk dribbling, gagging, and sleeping in strange positions ($p<0.0001$).
- For the patients who presented with grinding, the results were not statistically significant due to limited data for this symptom.

CONCLUSIONS

Performing frenectomies improved pediatric dental patients’ tongue and lip tie symptoms of clicking, milk dribbling, gagging, and sleeping in strange positions. Although there was a change in patients who grind in their sleep, limited data prevented statistical analysis.

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