

Assessment and Management of Tongue-Tie in Children:

A Survey of Related Professionals

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Introduction

□ Ankyloglossia, commonly referred to as tongue-tie, is defined as a shortened lingual frenulum that may limit tongue mobility (Messner & Lalakea, 2002).

□ The significance of ankyloglossia has been a matter of debate within and across professions for some time (Lalakea & Messner, 2003).

□ Possible implications resulting from ankyloglossia include feeding difficulty, poor oral hygiene, and difficulty in speech production. Despite these several complications, research on tongue-tie is limited and focuses primarily on its impact on infant feeding.

□ Designed to be a systematic replication of a survey conducted by Brinkmann, Reilly and Meara (2004), which primarily explored beliefs and practices of Australian pediatric surgeons regarding efficacy or surgical management and determined referral patterns.

□ Results from Brinkmann et. al (2004) suggested that there was a strong belief that surgical intervention was necessary, but consensus was minimal regarding primary indicators for surgery.

Method

□ Cross sectional survey of 106 individuals in five different professions: oral and maxillofacial surgeons, otolaryngologists, dentists, speech-language pathologists and lactation consultants.

□ Response rate of 59.4% ($n=63$) was obtained of which 68% met inclusion criteria of involvement with at least one case of ankyloglossia within the past three years.

□ Two surveys were developed by the author in collaboration with current speech-language pathologists and with reference to a similar survey conducted by Brinkmann et al. (2004) in Australia.

□ One survey pertained to the knowledge of oral and maxillofacial surgeons, otolaryngologists, and dentists. A second survey targeted the knowledge of speech-language pathologists and lactation consultants.

□ Themes explored in the survey: referral patterns, method of assessment of tongue-tie, indications for surgical intervention, and outcomes from surgical intervention.

□ Data were summarized by item.

Results

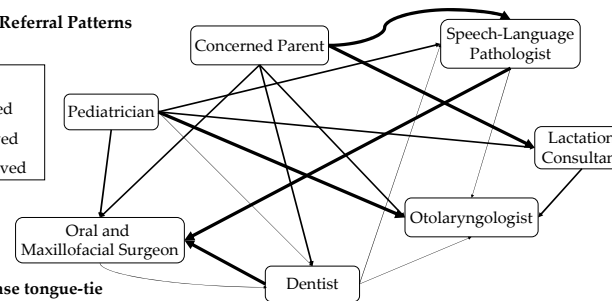
Demographic Characteristics

Professional Group	Completed/Received (n)	Distribution of Sample (%)	Mean Years in Practice (SD)
Oral and Maxillofacial Surgeon	8/8	18.6	24.0 (10.7)
Otolaryngologist	11/12	25.6	14.5 (7.4)
Dentist	6/13	13.9	20.3 (6.6)
Speech-Language Pathologist	10/21	23.3	23.6 (11.0)
Lactation Consultant	8/9	18.6	10.3 (6.0)

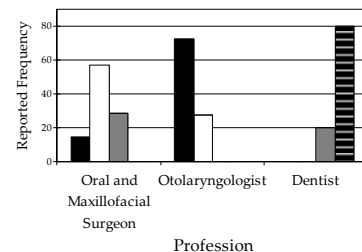
Reported Referral Patterns

Legend:

- = 1-30% of referrals received
- = 31-60% of referrals received
- = 61-100% of referrals received

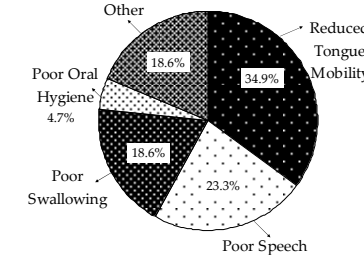


Surgical procedure to release tongue-tie



- Linear release without closure
- Linear release with closure
- Other
- Do not perform surgery

Most prominent indicator for surgery



Successful outcome following tongue-tie release	Total % (n)
Immediate cure	33.3 (13)
Cure following tongue exercises	2.6 (1)
Cure following speech therapy	15.4 (6)
Cure following both tongue exercises and speech therapy	23.1 (9)
Other	25.6 (10)
Total (n)	39

Discussion

This study was a systematic replication of the Brinkmann et al. (2004) survey; therefore, some general comparisons of the results can be made.

□ **Assessment technique:** Majority (93%) of respondents included an observation of tongue protrusion, which was also the primary assessment method reported in Brinkmann et al. (2004). The current survey suggests a functional assessment of tongue mobility was valued more than any elaborate procedure.

□ **Indicators for surgical intervention:** Reduced tongue mobility was reported to be the chief indicator for surgical intervention (78.6%), a finding consistent with Brinkmann et al. (2004). The second most frequent indicator for surgical intervention in both studies was poor speech/articulation.

□ **Success Rate:** Majority of respondents in both studies reported that their success rate of surgically corrected tongue-ties was between 76-100%. Brinkmann et al. (2004) suggested that very few respondents indicated a success rate of less than 25%, whereas the current survey revealed no respondent to believe the success rate of surgical intervention fell below 25%.

□ **Surgical Procedure:** The majority of oral and maxillofacial surgeons practiced "linear release *with* closure" and the majority of otolaryngologists reported to practice "linear release *without* closure." These results are in agreement with Brinkmann et al. (2004).

Clinical Implications

□ This study highlights the controversy that surrounds assessment and management of ankyloglossia both within and among professional groups.

□ Clinicians should be advised to thoroughly assess each case of ankyloglossia and make individual management decisions.

□ Results of the current survey emphasize the need for increased communication between professionals involved in ankyloglossia assessment and management decision making.

□ Future research endeavors should explore the connection between severity of tongue-tie and perceived outcome following surgical intervention.

Selected References

- Brinkmann, S., Reilly, S., & Meara, J. (2004). Management of tongue-tie in children: A survey of paediatric surgeons in Australia. *Journal of Paediatric Child Health*, 40, 600-605.
- Lalakea, M., & Messner, A. (2003). Ankyloglossia: Does it matter? *Pediatric Clinics of North America*, 50, 381-397.