

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Frenectomy Techniques for Infants with Tongue and Lip Tie: Clinical Effectiveness

Service Line: Rapid Response Service
Version: 1.0
Publication Date: May 17, 2019
Report Length: 5 Pages

Authors: Ke Xin Li, Suzanne McCormack

Cite As: *Frenectomy Techniques for Infants with Tongue and Lip Tie: Clinical Effectiveness*. Ottawa: CADTH; 2019 May. (CADTH rapid response report: summary of abstracts).

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

Funding: CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Research Question

What is the comparative clinical effectiveness between different surgical techniques used to perform frenectomy for infants with tongue and lip tie?

Key Findings

One systematic review was identified regarding frenectomy techniques for infants with tongue and lip tie.

Methods

A limited literature search was conducted by an information specialist on key resources including Ovid Medline, Embase, the Cochrane Library, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) via EBSCO, Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings) and keywords. The main search concepts were frenectomy tools and tongue or lip tie. No search filters were applied. The search was limited to English language documents published between January 1, 2014 and April 30, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Infants and newborns with tongue tie (ankyloglossia, tethered oral tissues [TOT])
Intervention	Frenectomy with one tool (scalpel, laser, or surgical scissors)
Comparator	Frenectomy performed with a different tool (scalpel, laser, or surgical scissors)
Outcomes	Clinical effectiveness (e.g., improvement in breastfeeding), harms (e.g., infection, delayed healing, increased breastfeeding problems)
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized trials

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.

One systematic review was identified regarding frenectomy techniques for infants with tongue and lip tie. No relevant health technology assessments, meta-analyses, randomized controlled trials, or non-randomized trials were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One systematic review was identified regarding frenectomy techniques for infants with tongue and lip tie.¹ The Agency for Healthcare Research and Quality's systematic review reported that the included case series studies examined different frenectomy techniques including scissors, scalpel, frenoloplasty, CO₂ laser, and Z-plasty combined with genioglossus myotomy.¹ The authors reported that no comparative effectiveness data was provided by these studies.¹

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Francis DO, Chinnadurai S, Morad A, et al. Treatments for ankyloglossia and ankyloglossia with concomitant lip-tie. (*Comparative Effectiveness Review no. 149*). (Prepared by the Vanderbilt Evidence-based Practice Center under Contract No. 290-2012-00009-I). Rockville, MD: Agency for Healthcare Research and Quality; 2015. AHRQ Publication No. 15-EHC011-EF
https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/ankyloglossia_research.pdf
See: *Comparison of Surgical Approaches*, page 31

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Appendix — Further Information

Previous CADTH Reports

2. Tongue and lip tie cutting for posterior tongue tie and lip tie: clinical effectiveness. (CADTH rapid response report: summary with abstracts). Ottawa (ON): CADTH; 2019
<https://www.cadth.ca/tongue-and-lip-tie-cutting-posterior-tongue-tie-and-lip-tie-clinical-effectiveness-0>
3. Ankyloglossia. (CADTH environmental scan). Ottawa (ON): CADTH; 2018
<https://www.cadth.ca/ankyloglossia>
4. Frenectomy for the correction of ankyloglossia: a review of clinical effectiveness and guidelines. (CADTH rapid response report: summary with critical appraisal). Ottawa (ON): CADTH; 2016
<https://www.cadth.ca/frenectomy-correction-ankyloglossia-review-clinical-effectiveness-and-guidelines>

Randomized Controlled Trials – Unspecified Age

5. Yadav RK, Verma UP, Sajjanhar I, Tiwari R. Frenectomy with conventional scalpel and Nd:YAG laser technique: A comparative evaluation. *J Indian Soc Periodontol*. 2019 Jan-Feb;23(1):48-52.
[PubMed: PM30692743](https://pubmed.ncbi.nlm.nih.gov/30692743/)

Reviews

6. Douglas P, Geddes D. Practice-based interpretation of ultrasound studies leads the way to more effective clinical support and less pharmaceutical and surgical intervention for breastfeeding infants. *Midwifery*. 2018 Mar;58:145-155.
[PubMed: PM29422195](https://pubmed.ncbi.nlm.nih.gov/29422195/)