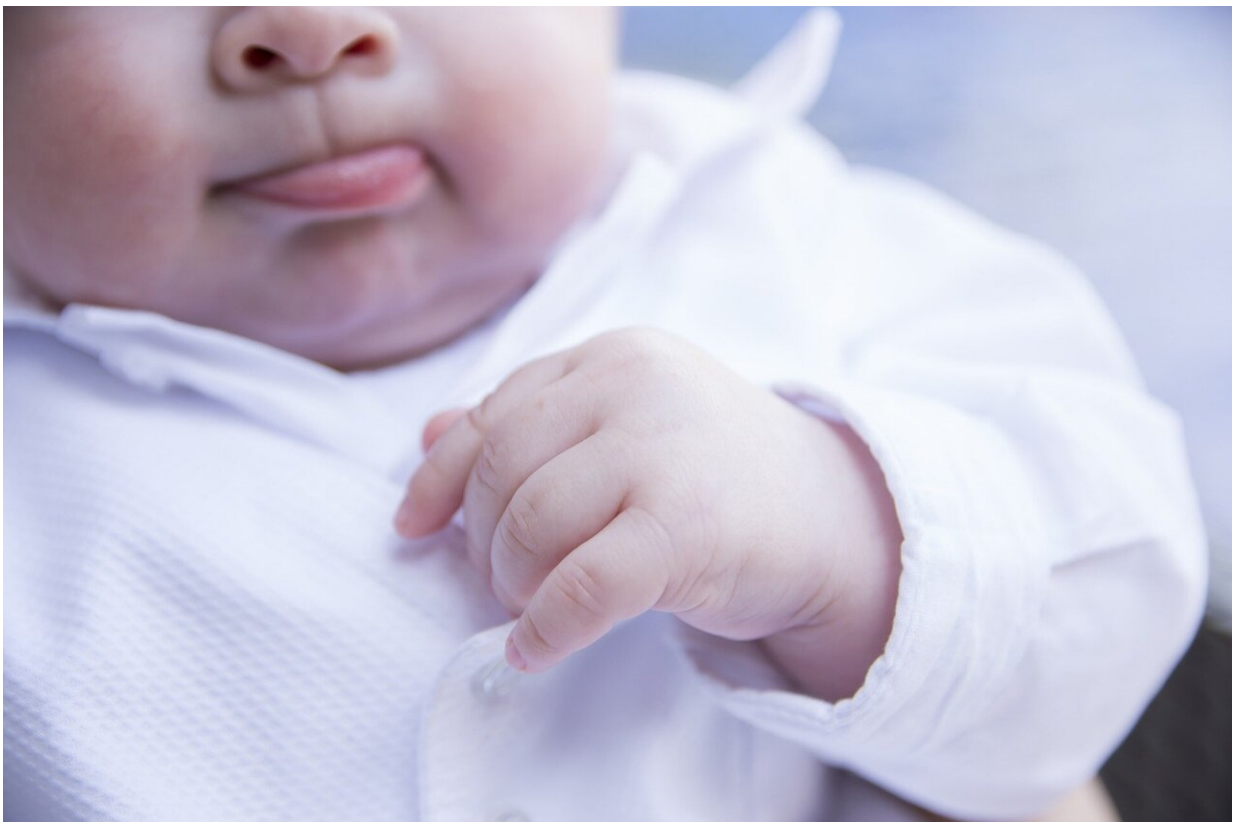


Pediatric study sheds light on new tool for identifying infants with tongue tie requiring frenotomy

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The World Health Organization and several national health organizations recommend exclusive breastfeeding for infants, at least for the first six

months of their life to protect the health of infants and mothers. Among breastfeeding infants, however, variations in the thickness of the membrane underlying their tongues (also known as lingual frenulum), are known to result in a condition known as tongue tie (or TT).

The lingual frenulum can either be too short, inelastic, thickened, or attached too close to the [tongue](#) tip. This can restrict the infants' tongue movement, making it difficult for them to breastfeed, which could result in significant health impediments for both babies and mothers.

Often, when TT becomes a major obstruction to breastfeeding, a [surgical procedure](#) known as frenotomy is recommended. In this procedure, the lingual frenulum is divided or cut, allowing for easy movement of the tongue. However, frenotomy is a widely debated procedure in the medical community.

Several tools exist globally for assessing TT and determining the need for frenotomy, but many of these have a lot of criteria and are complicated to use in clinical practice. In fact, there are no universally accepted criteria for diagnosing TT and ascertaining the need for frenotomy. This results in underreporting of TT cases and unnecessary referrals for frenotomy.

To make it easier to determine the proportion of babies with TT and the frequency of frenotomy, a team of clinicians and researchers from the Memorial University of Newfoundland and Labrador, St. John's, Canada, developed a new referral pathway and Frenotomy Assessment Tool in one region of their province. Implemented in July 2017, the new tool and referral pathway was created to help potential TT cases receive correct evaluation and treatment for the condition; and to subsequently record the actual numbers of TT cases in the region.

A cross-sectional study [published](#) in *Pediatric Investigation* on 28

February 2024 now provides insights gained by implementing this tool in the region. The tool consists of two components, first an assessment of the infant during breastfeeding, and second, a visual inspection of the lingual frenulum and the tongue.

Elaborating further regarding the purpose of the study, Dr. Lee explains, "The primary objective of our study was to describe the proportion of breastfed babies with TT who required frenotomy and the factors associated with it. In this vein, implementing the new tool allowed us to gain a better understanding of the epidemiology of TT and its impact on breastfeeding outcomes in our region."

The study included 241 breastfeeding infants who were referred for TT evaluation and frenotomy between July 2017 and August 2018. The data that was collected retrospectively and analyzed using Statistical Package for Social Sciences (SPSS); factors associated with frenotomy were determined using logistic regression.

Of the 241 babies referred for assessment, 92% or 222 infants were diagnosed with TT, suggesting that the prevalence of TT was approximately 11% among breastfed babies in the region during the study period. Of these 222 babies, 66% underwent frenotomy. Among the factors found to be significantly associated with the need for frenotomy were nipple pain, inability to latch, inability to elevate tongue, and dimpling of the tongue on extension.

These findings show that most infants who were referred for TT evaluation were, in fact, suffering from this condition, suggesting that TT was a common occurrence among breastfed babies in the region.

Additionally, the study confirms that the Frenotomy Assessment Tool can effectively diagnose TT in babies and identify whether they need frenotomy. Given that only four factors were associated with frenotomy

in the study, it could be possible to reduce the number of criteria included in the tool. This can, in turn, potentially make the implementation of this tool easier, and thereby increase its usage among clinicians, improve the diagnostic standards for TT, and reduce unnecessary referrals for frenotomy.

Elucidating further on the implications of their study, Dr. Lee says, "Based on our findings, the use of the Frenotomy Assessment Tool and referral process has been extended to other areas of the province. Future research should examine whether a simplified assessment tool, containing the four items associated with frenotomy in our multivariate mode, can identify breastfed infants with TT who require frenotomy."

Although further improvements are needed in the long run, this novel tool can ensure accurate TT diagnosis in [infants](#), enabling early and appropriate clinical interventions.

More information: Tiffany A. Lee et al, A cross-sectional study of breastfed infants referred for tongue tie assessment and frenotomy in one Canadian health region, *Pediatric Investigation* (2024). [DOI: 10.1002/ped4.12416](#)

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