

## **Tongue Tie: Cutting through the Controversy**

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In surgery, there's a saying: "A chance to cut is a chance to cure." Most surgeons learn early on that a good surgeon knows *how to operate*; but a great surgeon knows *when not to operate*. This issue continues to be met with when it comes to tongue tie surgery. Tongue tie, or ankyloglossia, is a manifestation of the thin band of tissue, usually a translucent, white membrane, on the undersurface of the tongue, known as the lingual frenulum. Diagnosis and management sparks debate between pediatric colleagues.

Ankyloglossia is classically seen in newborns who have difficulty latching to the breast for feeding. The tethering of the tongue to the floor of the mouth can interfere with an adequate latch and suck. The infant may then use accessory means such as biting on the nipple. This can be painful for the breastfeeder. Subsequently, inability to feed adequately ensues. This is frustrating and uncomfortable on the breast. Women often experience nipple bleeding, while infants have poor weight gain. Some of these newborns maintain a good seal with a bottle nipple, as this requires less active coordination, less need for lingual motion, and easier passive expression of milk, especially in the first few days of life.

Frenulotomy, or frenulum release, in newborns is typically performed either before hospital discharge, or during the first few weeks of life, by a pediatrician or a pediatric otolaryngologist. The procedure is relatively painless and can lead to immediate improvement in latching to the breast. Over the past decade, affluent countries have noted an exponential increase in the number of infants being diagnosed with ankyloglossia. Interestingly, there has been an even higher rise in frenulotomies, even compared to the rise in diagnosis. Reasons for this include: increased recognition of ankyloglossia, encouragement of breastfeeding, and availability of a procedure to rectify the problem. In addition, anomalies in the upper lip frenulum also have been suspected of causing difficulties with breastfeeding. The surge in diagnosis extends beyond infancy into later years, whereby these tissue bands are said to cause issues from speech and articulation errors to sleep disorders. Indeed, severe ankyloglossia later in infancy may hinder lingual mobility enough to impact speech quality, but the incidence of this pales in comparison to the frequency of diagnosis.

In April 2020, the American Academy of Otolaryngology commissioned a panel of pediatric otolaryngologists to review over 200 peer-reviewed articles. A summary of the Clinical Consensus Statement is highlighted [1]:

- In some communities, infants and children are being over-diagnosed with ankyloglossia.
- In some communities, a significant number of children are having unnecessary surgery on the lingual frenulum.
- Surgery to release a "buccal tie" should not be performed.
- Ankyloglossia does not cause sleep apnea.
- Maternal pain and poor infant latch can be caused by ankyloglossia, but these symptoms can also be present with other etiologies of breastfeeding difficulties.
- Presence of an upper lip frenulum is normal.

- There is no evidence that routine release of the upper lip frenulum is beneficial to breast feeding.

Additional key points include assessing other potential sources of feeding difficulties, such as nasal obstruction, palatal issues, laryngomalacia, and retrognathia. Frenulotomy should be avoided on infants with a normal frenulum and no lingual restriction. The procedure should not be performed to prevent potential future problems in eating or speech. Post-procedure care regimens such as stretching exercises carry no evidence of benefit.

In the setting of so little evidence of benefit, how many unnecessary procedures are being performed? We may never know. A two-week-old who is having some feeding challenges undergoes upper lip frenulum laser release, and then feeds better a week later. Was it the procedure, which likely had minimal impact on the latch, or was it a placebo effect? While an infant may not experience the placebo effect directly, parental placebo effect, mixed in with a little bit of time, could play a bigger role than we know. And while these procedures are overall safe, albeit many times unnecessary, no procedure comes without risks. Facial burns, scarring, infections, bleeding, and need for further revision surgeries have become more commonly seen in the hospital and subspecialist settings. It's a big price to pay, for a procedure with questionable necessity and a pretty hefty price tag.

Surgical procedures, no matter how safe or commonly performed, are not without risks. Furthermore, future revisions are quite costly and are not evidence-based. Overall, a proper diagnosis can be in an infant and parents' best interest for the best outcome.

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#### References:

[1] Messner AH, Walsh J, Rosenfeld RM, et al. Clinical Consensus Statement: Ankyloglossia in Children. *Otolaryngol Head Neck Surg*. 2020;162(5):597-611. doi:10.1177/0194599820915457