To cut or not to cut?

Approach to ankyloglossia

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Congratulations!" I greet the new parents with their baby, Benjamin, at their first visit to my clinic. The 3-week-old baby boy is held with meticulous care by his loving mother. It is evident that the first-time parents' overwhelming excitement about this ordeal is also accompanied by a grain of anxiety. They want to consult with me regarding a medical recommendation they recently received. Their full-term male infant underwent a normal delivery and has since been nursing normally, filling his diaper at regular intervals, and gaining weight without any irregularities. However, the nurse at the well-baby care clinic called the mother's attention to what she thought was a rather serious case of ankyloglossia (also known as *tongue-tie*).

The nurse told Benjamin's mother, "I suggest you see a specialist who treats this sort of condition."

Benjamin's mother hands me a letter signed by a dentist who has multiple letters following his title that I cannot comprehend, probably indicating academic affiliations. The principle theme of the correspondence is the diagnosis of both a type 2 lingual frenulum and a larger-than-normal upper labial frenulum. For these conditions, the dentist assertively recommends performing "release" of the adhesions to improve feeding and prevent future dental, oral hygiene, and speech complications. He explains that the procedure would be completed in a single brief session with little suffering and would provide immediate "relief"—all for a bargain fee of $300 in cash. The parents ask me if I agree with the dentist's recommendation.

I wonder whether the couple has been exposed to any additional information and whether it is influencing their decision to agree to this "generous" offer. The couple describes conversations they have read on online forums for mothers. The mothers whose infants had the procedure claimed that they believed it was relatively painless and there were no adverse sequelae. These mothers expressed satisfaction with the procedure because their children never experienced oral issues and their children suffered less from colds and ear infections, just as promised.

I had to work hard to examine the existing body of information on this topic to formulate my opinion.

Discussion

The dispute regarding the approach to oral frenula has spread across the centuries, and to date their importance is still under debate. In the middle ages in France, a midwife inspected the frenulum linguae of a newborn and cut it with her fingernail if it appeared bothersome, and if suckling difficulties persisted, she would repeat the procedure on the third day.[1] This practice was common in Europe.[2] In the modern era, the connection between breastfeeding and ankyloglossia was denied. As Illingworth said: "There are still doctors who cut the frenulum in the newborn period. This is always wrong."[3] Until 1991 such an abnormality was purely discussed in relation to articulation and malocclusion.[4] No systematic studies were performed until the work by Mukai and colleagues, who were the first to introduce a classification describing 51 subjects.[5] They claimed the condition affected positioning of the epiglottis, glottis, and hyoid bone leading to oxygen saturation effects, with improvement in all these parameters solely by releasing a taut lingual adhesion. Since that publication there have been a number of high-quality studies demonstrating strong evidence of alleviation of breastfeeding difficulties by treating ankyloglossia. Berry et al, for example, performed a randomized controlled trial of 57 infants with breastfeeding problems and ankyloglossia; 27 infants received tongue-tie division, while 30 infants were in the control group. A significantly higher percentage of infants in the intervention group had maternal reports of breastfeeding improvements ($P<.02$); interestingly, there was no difference in maternal nipple pain scores.[6] Eight more high-quality trials consistently justify frenotomy to improve existent breastfeeding problems.[7-15] However, speech impediments were not improved.[16-18]

A fierce dispute exists over the actual prevalence of ankyloglossia and upper labial frenula in the population, with extremely diverse and conflicting reports. Original data range from 0.02% to 4.8%.[4,19-22] Rates of up to 10.7% have also been reported.[23] Bai and Vaz, who evaluated the incidence of ankyloglossia among 700 older schoolchildren in normative and supportive educational systems in India, identified an incidence of ankyloglossia of 16.4%.[24]

I also personally contacted members of a group who performed a hitherto unpublished trial meticulously studying infants within their first 72 hours of life.[25] Lingual frenula were divided into 4 types (Coryllos classification[26]) according to the insertion point at the bottom of the tongue. An upper labial frenulum was described by its width at the alveolar ridge, its distance from the alveolar ridge, and its width at the lip sulcus. In 141 term infants, the distribution of ankyloglossia was as follows: 32% had the

first 2 types, with only 1 case having no frenulum at all; and a labial frenulum was present in all infants. For 43% of infants, insertion of the labial frenulum was at the alveolar ridge. None of the infants underwent lingual or labial frenotomy. Ninety percent of the mothers planned to breastfeed. Of the 20 mothers who stopped breastfeeding 2 weeks later, only 8 attributed the difficulty breastfeeding to ankyloglossia.

Of note, the lack of frenula is so rare that it has been suggested as a minor criterion of Ehlers-Danlos syndrome[27]; however, this is still controversial.[28,29]

In a letter to the editor regarding an article on ankyloglossia, Marasco,[30] a member of the International Affiliation of Tongue-tie Professionals, summarized the evidence by highlighting

> [The variation in reported prevalence] seems to be due to lack of uniformity in definition and grading ... the sooner we have an accepted definition of the problem, the better our data will become. After much discussion, the IATP [International Affiliation of Tongue-tie Professionals] reached a consensus on this definition: "An embryological remnant of tissue in the midline between the undersurface of the tongue and the floor of the mouth that restricts normal tongue movement." This statement is deliberately broad and emphasizes function over appearance.[30]

In a study conducted in a clinic setting in which I practise, breastfeeding difficulties were alleviated in more than 80% of carefully selected cases treated for ankyloglossia.[31] Only once was the labial frenulum electrocauterized.

Conclusion

My recommendation, completely in line with the latter above researchers,[25,30,31] is that only breastfeeding difficulty, not the mere existence of an oral frenulum, warrants medical intervention for ankyloglossia.

I assure Benjamin's parents that the offered procedure will contribute little to Benjamin and that they should continue the devoted nurturing they have provided until now without any fear.

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Competing interests
None declared

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