Modern Myths about Tongue-tie

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The Unnecessary Controversy Continues

Twenty-three years ago, when I was doing my research on tongue-tie’s impact on breastfeeding and developing the Assessment Tool for Lingual Frenulum Function, the most problematic attitude I ever encountered was resistance to the idea that tongue-tie could create a breastfeeding problem. This resistance was purely due to lack of knowledge about the physiology of infant suck. Occasionally back then, I might have met someone whose resistance was ego-driven—the “not invented here” line of thinking—but that was the exception rather than the rule. Then, the challenge for those of us who understood how tongue-tie impacted infant suck was to educate, educate and educate some more.
Today, the controversy over various aspects of the tongue-tie phenomenon are liberally laced with ego-driven resistance. It seems as if the entire world of practitioners has something to say about tongue-tie, regardless of level of expertise on the subject. And now the notions of “lip” and “buccal” tie, and to complicate matters even more, this thing called “tethered oral tissue,” have entered the picture to further confuse parents and practitioners alike. Is this labyrinth of information, misinformation and dis-information helping us to get treatment for truly tongue-tied babies?

A dialectic between smart people who have no vested interest other than to help others remains ever useful. An out-and-out brawl between various factions of people spouting dogma that is liberally littered with poorly informed opinion does not. I am all for helping moms and babies, but I am definitely for helping them using solid evidence, so that they get the right kind of help, at the right time, from the right practitioner.

I vote that we get back to anatomy and physiology, and get back to using the evidence to support what we do as practitioners and as parents faced with making the decision to have surgery performed on our infants. Let’s start with what we know about tongue-tie.

The facts:

**Fact 1:** Tongue-tie does exist. It even has its own gene(s) that codes for it.

**Fact 2:** It manifests with various syndromes, which in and of themselves are relatively rare.

**Fact 3:** It is hereditary.

**Fact 4:** It has for a very long time had a clear definition: Tongue mobility restriction due to a tight and/or short lingual frenum.
Fact 5: It is a congenital anomaly. Regardless of whether tongue-tie is genetic or epigenetic, it occurs during development in the embryonic period.

Fact 6: Because tongue-tie, by definition, is impaired tongue mobility due to a congenital anomaly, it can cause deficits in all functions that require optimal tongue mobility, whether that be breastfeeding, bottle-feeding, chewing, protecting the airway, cleaning the teeth, or helping to form speech sounds. The degree to which this happens is somewhat known but more research needs to be done before we have a firm grasp on this. Only then can we fine-tune our treatment approach.

Fact 7: The incidence of tongue-tie was only hypothesized until of late. A study out of Australia has shown that the incidence hovers around 5 percent of all people. More research needs to be done before we know an exact figure. The problem with incidence figures in the past was that no standardized assessment was being used. The study’s author, Dr. Todd, however, used a standardized, evidence-based screening tool for three years in a row in a large sample of infants. He was able to come up with what appears to be a very solid incidence statistic as a result. Please note here that Mother Nature does not create catastrophic increases in incidence of congenital anomalies unless some catastrophic epigenetic influence is at play. To claim that there is a rise in incidence to the tune of 20 to 50 percent is a clear misunderstanding of how epigenetic influences function epidemiologically.

Fact 8: Scissors frenotomy performed by trained practitioners has little to no risk. (No such data exists for laser, electrocautery or scalpel frenectomy.)

Fact 9: Breastfeeding improves post-frenotomy/frenectomy as long as tongue function is normalized as a result. Not all babies will show such improvement. Anecdotally, many babies will need further therapy to restore proper tongue-function post-surgery.

Fact 10: Any connective tissue in the body (frena included) can be tight and impair optimal function. At what point that tightness can so severely impact function that no compensation can override the restriction is an important question to put to the researchers.

Now, why do I bring up Fact 10? Because two interesting theories have emerged in the last 10 years. One theory proposes that the upper lip frenum can cause breastfeeding problems. One
case history was published detailing the way in which the upper lip frenum created a problem. Recently, an article fleshing out the theory was published proposing a classification schema to help people determine the presence of a lip frenum that negatively impacts breastfeeding. Unfortunately for the proposer, the classification system proposed did not go through the validation process, so it really cannot yet be said that it accurately identifies the type of upper lip frenum that could cause a breastfeeding problem.

Let’s look more closely at the assertion that a tight, prominent upper lip frenum causes breastfeeding problems. We can use anatomy, physiology and development as our guide. First: The upper gumline changes with growth. A frenum that appears to be restricted in early infancy may substantially change as the baby grows. Second: Breastfeeding does not require a lip flange, merely lip eversion. Third: The assertion that dental caries are caused by an upper lip tie begs to be proven. Breastmilk does not pool in the mouth. The position of the nipple in the mouth and the manner in which that milk is moved into the pharynx for the swallow won’t allow it. Both the peristaltic action of the tongue and the pressure differential created by tongue movements quickly push/pull the milk to its ultimate destination.

Fourth: The lips follow the tongue; if the tongue retracts, the lips move inward toward the gumline and when the tongue everts, the lips also evert. This is a developmental reflex that remains active throughout life. Anyone who has ever French-kissed can assert the truth of this. Tongue position plays such a keen role in the positioning of the lips that many types of acquired structural issues, like torticollis, can cause the tongue to retract thereby pulling in the lips. In my experience, this can be mistaken for what the theorists call an upper lip tie.

In my clinic this past year I saw such a baby. She had been misdiagnosed with both a tongue-tie and an upper lip tie. She actually had low cheek tone and overactive, tight lip tone. One of my colleagues performed some very effective bodywork to bring down the lip tone and bring up the cheek tone. It took her three minutes to rectify the problem at no cost to the mother and the baby was saved from unnecessary surgery.

That leads me to my next point. Without a valid definition of upper lip tie (one based on solid facts about how the labial frenum impairs lip mobility in the specific manner that actually impairs breastfeeding), we are hard-pressed to be able to assess it properly. The exact characteristics of a phenomenon must first be established before assessment tools can be generated to assist the clinician in proper diagnosis. No such work has yet been done.
We have put the proverbial cart before the horse when it comes to the theory of upper lip tie. How many babies have suffered the consequences as a result?

Does that mean upper lip tie doesn’t actually exist? Theoretically it could because any connective tissue in the body might, out of tightness, negatively impact function. Does a tight, prominent labial frenum actually negatively impact breastfeeding? Only future research will prove or disprove this theory. Until the evidence shows us what is true, ethics dictate that practitioners remain conservative in their clinical approach.

Let’s talk about the second theory: that of the sub-mucosal posterior tie. I have been liberally accused of not believing in the posterior tie. Belief has nothing to do with it! Any clinician operating by belief is shirking his or her professional and ethical duty.

My clinical approach to the sub-mucosal tie theory is conservative. To my knowledge, no research has ever been done to verify that a restriction at the tongue-base that presents as a thick, shiny string under the mucosa is an actual tongue-tie. My experience as a structural therapist, and in the experience of many a bodyworker throughout the world, has shown this type of tongue and/or mouth floor restriction resolves with simple bodywork; the actual cause of this type of restriction is an acquired soft-tissue strain pattern due to intrauterine or birth events.

Once again, anatomy can inform us. That tight shiny string of tissue underneath the mucosa at the tongue base may very well be the septum of the genioglossus muscle, the tough aponeurosis (a type of fascia) that connects the two halves of the genioglossus muscle together helping to stabilize the tongue in the mouth. The septum attaches to both the inside of the mandible at the mentis and to the hyoid bone in the upper throat and is confluent with the hyoepiglottic ligament. The septum is easily visualized when two fingers press back against the tongue-base. Some practitioners claim this maneuver renders an accurate diagnosis of “sub-mucosal tongue-tie,” but it may be revealing the septum of the genioglossus muscle. One has to know what one is visualizing to avoid making an erroneous diagnosis.

Ultimately, what seems to get lost in the argument over sub-mucosal tie’s existence or nonexistence is that theories must be proven. We all share the burden of that proof (or disproof). It is completely legitimate to remain skeptical until more data emerges, especially when the “cure” suggested involves cutting a baby! I remain skeptical. The dearth of evidence for this phenomenon, which may or may not be the congenital anomaly we call tongue-tie, coupled with my own experience working with these babies as a bodyworker keeps me sitting
on the fence.

Let’s now turn to the myths:

**Myth 1: The incidence of tongue-tie is increasing.** No one, anywhere can make this assertion. No accurate incidence statistics existed prior to Todd’s 2014 study. The incidence may well indeed be population-based, but epidemiological studies must be done to assert this as fact.

**Myth 2: All babies who have a tongue-tie have an upper lip tie.** How can this be true? We have no idea what a lip tie actually is, and no valid, reliable assessment tool to even begin discerning who may have an issue and who does not.

**Myth 3: Laser frenectomy is better than scissors frenotomy.** No evidence demonstrates that this is the case. Any advantages of either are postulated.

**Myth 4: All tongue-tied babies need a deep frenotomy.** It might be true that some babies will achieve optimal range of motion of the tongue with a shallower snip. We need more evidence to make such a determination.

**Myth 5: Laser frenectomy is completely safe.** Lasers are, in fact, very dangerous and can do significant damage when used by an untrained practitioner. A definitive set of safety rules guide practitioners to utilize laser equipment without posing harm to themselves or their patients. There are several different types of lasers; some more suited for soft-tissue surgery. The wrong laser can damage collateral tissue and create excessive scar tissue that may cause reattachment. Currently, there is no requirement for a dentist or doctor to receive training to use lasers before performing surgery on babies.

**Myth 6: The scar tissue in the wound bed must be broken down several times per day to prevent excessive scar tissue formation (reattachment).** According to new research, the frenum is a tendon, a type of fascia. Breaking down the scar tissue in the fascial wound bed causes myofibroblasts to lay down a dense collagen network (excessive scar tissue...
formation). Gentle is better, both physiologically and psychologically. It is a shame when we cause a baby trauma from too aggressive post-surgical management. Come to think of it, there is no solid evidence that post-surgical aftercare prevents reattachment. Two studies have been performed; one was extremely flawed.

**Myth 7: There is a posterior tie behind every anterior tie.** Histologically this is not true. This cute statement is misleading if the purpose is to encourage surgeons to remove enough tissue to adequately mobilize the tongue. It seems much clearer to say that enough tissue must be removed (without cutting into muscle) to restore optimal tongue mobility in some babies.

**Myth 8: Posterior ties are more common than anterior ties.** Oops! Todd’s research definitively shows this is not true. Proper assessment, proper assessment, proper assessment and differential diagnosis!

**Myth 9: Classification schema serve as proper assessment.** Nope, they don’t. An assessment tool must possess the following: validity, reliability, sensitivity and specificity. In other words, it must be designed and be proven to accurately identify the phenomenon being assessed, be able to do so accurately from assessment to assessment and from assessor to assessor and must be able to do so nearly 100 percent of the time. A tool that falsely identifies someone as having a problem when they don’t, or not having a problem when they do, is not accurate enough.

**Myth 10: Any lactation consultant knows how to properly assess for tongue-tie.** As in any profession, members of that profession must be trained to properly assess for any given phenomenon. For that matter, not all physicians, dentists, speech-language pathologists, etc., have been trained to assess for tongue-tie. It behooves parents to ask if the practitioner has been trained to assess for tongue-tie using an evidence-based assessment tool.

For some reason, tongue-tie has become the poster child for dogma and controversy. We are at the very beginning of our understanding of this congenital anomaly. (Don’t let anyone tell you otherwise!) That means that no one knows the entire story yet. Time and more research will tell us what is true and not true about this phenomenon. Until then, we must exercise healthy skepticism, continue to ask the hard questions, engage in respectful dialectic and err on the side of caution. Our vulnerable babies depend on us to keep them safe from harm, and that includes holding off on surgery if no evidence exists to put them through such surgery.
Our egos must learn to stand the strain of not knowing.

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