D4C Guideline on Frenectomies Treatment with Diode Laser

The QCT understands that frenectomies are part of comprehensive care that pediatric dentists can provide our young patients. Frenectomies, when done selectively in alignment with AAPD guidelines, have been shown to improve the ability of newborns to nurse, improved ability to keep upper anterior teeth clean, improved speech and prevention of gingival recession.

The QCT requires that before a frenectomy is completed, appropriate notes and pre and post treatment photographs are taken to support the necessity of the procedure. Furthermore, the QCT recommends that children under the age of 1 have appropriate documentation from a lactation specialist and/or pediatrician indicating a need for the procedure. If there are speech issues, appropriate documentation from speech pathologist should also be included.

The QCT also understands that frenectomies done with laser technology allows for shorter treatment time, better control of hemostasis, reduced intra- and post-operative discomfort, fewer post-operative complications and no need for suture removal.

Protocol

1. Appropriate Diagnosis based on current AAPD and D4C guidelines. Including classification. (see below)
2. Proper documentation placed in chart to support diagnosis such as request from lactation specialist/pediatrician or speech pathologist.
3. Risk/benefits including possibility of re-attachment after procedure discussed with guardian and consent forms for laser frenectomies signed.
4. Consent for restraint signed if necessary (See appendix)
5. Test Laser and confirm set up before bringing patient into operatory.
6. Appropriate pre and post procedure photographs taken to be kept in electronic record.
7. Proper eye wear utilized for patient, pediatric dentist and assistant.
8. No other people in operatory while laser in use.
9. Sign on operatory door alerting staff that laser in use.
10. Appropriate chart notes. (see appendix)
11. Post op care instructions must be given along with explanation of stretching exercises. (see below)
12. Follow up appointments to check healing and re-attachment at 1 week and 2 weeks.
13. Document healing and patient response to procedure at each follow up.
Classification of Maxillary Frenum: Placek et al.

Class 1. Mucosal (frenal fibers are attached up to the muco-gingival junction);

Class 2. Gingival (frenal fibers are inserted within the attached gingiva);

Class 3. Papillary (frenal fibers are extending into the inter-dental papilla); and

Class 4. Papilla penetrating (frenal fibers cross the alveolar process and extend up to the palatine papilla).

Classification of Lingual Frenum: Kotlow’s Classification for Infants

Class 1: Tongue tie is located from base of tongue, halfway to the salivary duct

Class 2: Tongue tie located between the back of salivary duct halfway to the base of the tongue.

Class 3: Tongue tie located between the salivary duct halfway to tip of the tongue

Class 4: Tongue tie located from tip of tongue extending halfway between the salivary duct and the tip of the tongue. (Pictures in article below)

For Older Children: Classification based on “Free Tongue Length”

Clinically acceptable: Normal range of free tongue =>16mm

Type 1: mild ankyloglossia=12-16mm

Type 2: moderate ankyloglossia=8-11mm

Type 3: severe ankyloglossia=3-7mm

Type 4: complete ankyloglossia=<3mm

Chart Note

CDC COVID Preventive PPE requirements utilized for this procedure

Pt asymptomatic for COVID (if not include details)

Day/week/month old Pt presents with (Mother/Father) for_______ maxillary______/lingual Frenectomy.

Pt presents with class ______ maxillary frenum and or class ______lingual frenum requiring treatment for normal function.
The patient presented with the following symptoms that indicate a frenectomy will be beneficial:

______________________________________________________________________________

The following was explained to the parent and frenectomy consent form signed obtained prior to treatment.

Based on the clinical exam and symptoms, the maxillary and/or lingual anterior frenum(s) is/are deeply implanted from lip to lingual side of palate and/or implanted deeply under tongue and connected to the alveolar ridge. The presence of this deep, fibrous congenital malformation can prevent proper latching for breast feeding, can cause loss of weight due to inability to feed correctly and painful nursing for mother. Additionally, it may interfere with proper movement of lip and tongue which can cause issues with proper placement of perm/primary teeth, smiling, speech and dental decay as the lips and tongue are unable to perform their normal self-cleaning function of the teeth. These frenum should be resected and the frenum placed more superiorly under the lip/tongue to help alleviate these problems.

PROCEDURE:

Protective eyewear and shirt protector placed on patient. Topical anesthetic 20% benzocaine applied. 2% lido ___mg with 1:100,000 epi given as maxillary buccal and lingual infiltration.

DDS used a Diode laser on soft tissue setting to resect frenum tissue.

Pre/post op photos taken.

Maxillary Frenectomy completed no complications. Hemostasis achieved and no sutures necessary

Lingual Frenectomy completed with no complications. Hemostasis achieved and no sutures necessary.

Pt's behavior was ____ on Frankl scale pt was swaddled/ pedi wrap with parents' knowledge and consent.

Gave post op and frenum instructions to (Mother/Father). Instructed/demonstrated how to massage and stretch tissue 5+ times a day to help tissue not re- attach.

It was explained to PARENTS THAT WITHOUT following the PROPER MASSAGE AND STRETCHING exercises the frenae will heal together and further surgery may be necessary.

Post-operative instructions given to parent including proper use of analgesics.

NV: 1 week check of Frenums
**Post Op Instructions:**

**Lingual Frenectomy (tongue-tie):**

Your goal is to have the frenum heal and re-form as far back as possible.

1. With a clean or gloved finger, lift the tongue at the top of the diamond in the middle of the tongue. Your goal is to see the whole diamond open up and lengthen. It may bleed slightly when it is stretched or re-opened. This is not a concern. Begin doing this the morning after treatment. Try to make a game of it if possible and keep it playful.
2. Repeat this 5 times a day, at various times during the day for 3 weeks.
3. Encourage the child to move the tongue as much as possible by sticking it out and holding for 10 sec, out to the left, right, open wide and lift up, make clicking noises, and clean off the teeth. Do these exercises as often as possible, but try for 4 times a day.
4. The released area will form a wet scab after the first day. It will appear white or yellow and soft because it is wet. This area is what you will be pressing against. The healing will be happening under the scab, just like a scrape anywhere else on your body. The white area will get smaller each day, but healing is still happening! So even though the white scab will heal you MUST continue the stretching or the new frenum will not be as long as possible and the surgery may need to be repeated.

**Labial Frenum (lip-tie):**

The goal is for the frenum to heal and re-form as high as possible.

1. Pull the lip up as high as possible, high enough to press against the nose. You want to see the whole white diamond open up. Press gently but firmly against the wound to massage it and keep the diamond open. It may bleed slightly when this is done, but this is not a concern. Try to make a game of it if possible and keep it playful.
2. Repeat 5 times a day, at various times during the day for 3 weeks.
3. The released area will form a wet scab after the first day. It will appear white or yellow and soft because it is wet. This area is what you will be pressing against. The healing will be happening under the scab, just like a scrape anywhere else on your body. The white area will get smaller each day, but healing is still happening! So even though the white scab will heal you MUST continue the stretching or the new frenum will not be as long as possible and the surgery may need to be repeated.

The child can eat whatever foods he or she can tolerate. Pain relief is needed the first few days. Give Motrin (ibuprofen) or Tylenol as directed on the package based on weight. If the lip-tie was released, the child’s lip may swell up slightly that evening or the next day. It is normal and will go down after a day or two. The wound will be sore for a few days, at one week look much better, and at two weeks look almost normal. A slight fever is normal the first day. They should eat and sleep normally. If you’re concerned it is growing back together, come back for a visit. Follow-up with a speech language pathologist, myofunctional therapist and/or bodyworker (Chiropractor, CST) is recommended for full rehabilitation.
**Videos**

**Infant frenectomy**  
[https://youtu.be/GIBNckiXTSc](https://youtu.be/GIBNckiXTSc)

**Treatment of ankyloglossia**  
[https://youtu.be/dIM1Hgwn8TY](https://youtu.be/dIM1Hgwn8TY)

**Articles**


**Books**

Tongue Tied: how a tiny string under the tongue impacts nursing, speech, feeding, and more. Richard Baxter DMD, MS., Rajeev Agarwal MD FAAP, et al.

SOS 4 TOTS, Lawrence Kotlow DDS.

Merkel-Walsh, Robyn and Lori L. Overland. Tongue-Tied: functional assessment and remediation of TOTs (Tethered Oral Tissues)

**Equipment**

DDP Grooved Director and tongue tie-Plain point  
(order from amazon)

Blue Wave, Diode laser  