Office-based frenotomy for ankyloglossia and problematic breastfeeding

A. Claire Kenny-Scherber MD CCFP IBCLC **Jack Newman** MD FRCPC FAAP

The Canadian Paediatric Society position statement "Ankyloglossia and Breastfeeding" describes the common congenital anomaly of a tight lingual frenulum, which can restrict tongue mobility and lead to breastfeeding problems. When ankyloglossia ("tongue-tie") contributes to substantial breastfeeding difficulties, frenotomy should be performed by an experienced clinician.[1] A review article on tongue-tie found the prevalence to be 2% to 5%, with 50% of infants with tongue-tie experiencing breastfeeding problems. Frenotomy is effective for improving breastfeeding and complications are rare.[2] Posterior tongue-tie is an emerging topic and a condition that can have a devastating effect on breastfeeding.[3] Given the prevalence of tongue-tie, most family physicians will encounter this problem.

Dr Jack Newman pioneered a technique for office-based frenotomy and Dr Claire Kenny-Scherber learned this technique when she spent 2 weeks training with him. This procedure is not technically difficult and can be learned by hands-on practice with an experienced physician. Office-based frenotomy is indicated for a newborn with tongue-tie and breastfeeding problems such as maternal pain, poor latch, damaged maternal nipples, nonlatching, and poor weight gain. The mother and baby should first be seen by a lactation consultant (LC) to attempt to achieve a pain-free latch. When breastfeeding problems persist, frenotomy is indicated. Contraindications are bleeding disorders and failure to receive vitamin K at birth. Adverse outcomes include risk of bleeding, pain, infection, damage to adjacent structures, failure to improve breastfeeding, and reattachment of the frenulum.

Materials required

The following materials are needed for the procedure:

- gloves;
- a head lamp or pen light;
- sterile, straight, blunt-tipped scissors;
- 2-inch by 2-inch gauze pads;
- silver nitrate and 1:1000 adrenaline (in case of serious bleeding); and
- sterile saline solution to wet the gauze.

Technique for tongue-tie release

The following is the technique for office-based frenotomy for treatment of ankyloglossia:

- The assistant hooks his or her index fingers under the infant's tongue and lifts the tongue superiorly to expose the lingual frenulum (**Figure 1**).
- Open scissors to a depth of 2 mm.
- Place the scissors against the frenulum away from the tongue and submandibular ducts and make a 2-mm cut into the tightest part of the frenulum (**Figure 2**).
- Push on the incision with an index finger to extend it fully (**Figure 3**). **Figure 4** shows a fully released frenulum.
- The LC should help the baby to optimize latching immediately after the procedure.

One potential pitfall is injury to the submandibular ducts, lingual artery, or genioglossus muscle. This technique minimizes damage to nearby structures and bleeding. Exercises should be done after the procedure to prevent reattachment of the frenulum. These involve the caregiver using his or her index finger to firmly push into the wound and upward in a *J* shape. This should be done 5 to 6 times per day for 7 to 10 days. Follow-up within 1 week of the procedure is recommended to check for reattachment of the frenulum. **Figure 5** shows a wound healing normally 3 days after frenotomy.

Discussion

Learning this technique has allowed Dr Kenny-Scherber to help mothers and babies who are struggling with breastfeeding problems due to tongue-tie. This procedure is safe and effective, requires minimal materials, and can be very beneficial. Dr Newman has not experienced any episodes of substantial bleeding using this technique in his many years of practice. There have been rare cases of prolonged bleeding requiring suturing, but this can be prevented with good technique. Possible alternatives to this procedure are waiting, obtaining help from an LC, or referring the patient to another specialist who performs frenotomy.

This method of office-based frenotomy has not been previously described. A review of articles on PubMed

Figure 1. Position for office-based frenotomy

using the search terms *frenotomy* and *technique* found a guideline from the National Institute for Health and Care Excellence describing the technique for division of ankyloglossia. It states that if done early in infancy no anesthesia is required. The method consists of the following: an assistant stabilizes the infant's head; sharp, blunt-ended scissors are used to divide the frenulum; and the infant resumes feeding immediately after the procedure.[4] Dr Newman's technique is an extension of the National Institute for Health and Care Excellence technique, as it adds a manual push to extend the incision for complete release. There is debate in the literature about the need for topical anesthesia for frenotomy in newborns. The American Academy of Pediatric Dentistry states that while frenotomy can be accomplished without local anesthesia, topical anesthetic gel is highly recommended for pain and to alleviate parental concerns.[5] Dr Newman has used topical anesthesia for frenotomy in the past but found that infants cried more and were unable to breastfeed immediately after the procedure. He now believes that breastfeeding and skin-to-skin contact immediately after frenotomy, as well as acetaminophen if needed, provide adequate analgesia for the procedure.

Figure 2. Initial incision with scissors

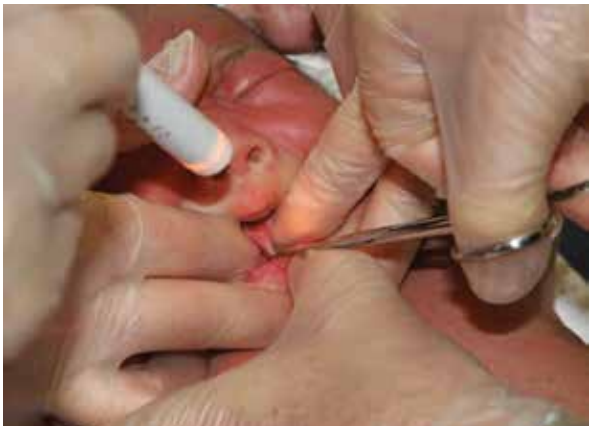
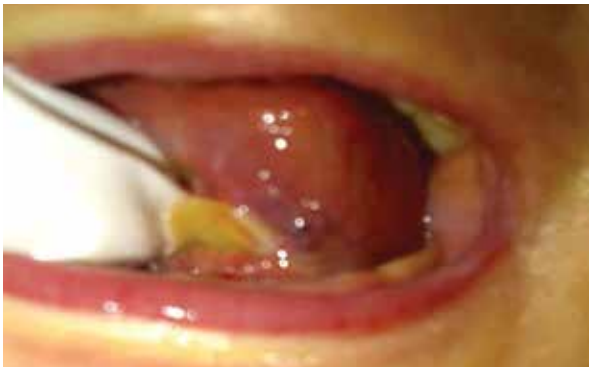


Figure 3. Manual push with index finger to achieve full release

Figure 4. Appearance of fully released frenulum

Figure 5. Wound healing normally 3 days after the procedure



Conclusion

This office-based frenotomy technique is unique, easy to learn, and safe, and has been shown to be beneficial.

Dr Kenny-Scherber is a family physician practising maternity care with the Partners in Pregnancy Clinic in Peterborough, Ont, and is Adjunct Assistant Clinical Professor in the Department of Family Medicine at McMaster University in Hamilton, Ont.
Dr Newman is a pediatrician specializing in breastfeeding medicine and is Medical Director of the International Breastfeeding Centre in North York, Ont.

Competing interests
None declared

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