Tongue-Tie download

Assessment, diagnosis, and treatment of Tongue-Tie in babies under 6 months old

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About the author

Katherine Fisher BSc, MSc is an International Board Certified Lactation Consultant with 19 years continuous registration; she was also an NCT Breastfeeding Counsellor for 20 years.

She attained extended competency in performing Frenulotomy through her clinical training at both Southampton University Hospitals NHS Trust and King's College Hospital Foundation Trust, she is one of only two Lactation Consultants/Tongue-Tie Practitioners in the UK to have been trained at both Trusts.

For the past 7 years she has been undertaking Frenulotomy (Tongue-Tie release) in both NHS and Private Practice, and has performed more than three-thousand procedures without adverse incident.

Katherine is the Team Leader of a large NHS Tongue-Tie Service. She also has an independent private practice offering Lactation Consultancy and Frenulotomy.

Tongue-Tie clinics and advice

Katherine is also in a joint practice with Mr Shailesh Patel, Consultant Paediatric Surgeon, at the London Tongue-Tie Clinic, East Croydon Medical Centre. If you would like to discuss your baby or make an appointment please call on my mobile number 07949 176 776 or email at katherine.r.fisher@gmail.com

Practice standards

Katherine carries out all her work in line with current clinical governance standards, and the Trust where she works provides her with regular clinical governance updates including Paediatric Intermediate Life Support, safeguarding and child health support. She is fully insured for both Lactation Consultancy and Frenulotomy.

The information in this document is based on my own practice; different practioners may use different techniques and offer varying advice.

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What is Tongue-Tie?

Tongue-Tie or Ankyloglossia is a mid-line anomaly and occurs as a result of incomplete cell division between the tongue and floor of the mouth at the seventh week of gestation. It is more common in boys (2:1), approximately 1:7 babies will have a Tongue-Tie and approximately one fifth of these will have posterior or sub-mucosal tongue tie. Tongue-Tie can also occur in more than one family member.

In anterior Tongue-Tie, you can easily see a string of tissue (the frenulum) that attaches the tongue to the floor of the mouth. In posterior Tongue-Tie this tissue is more difficult to see but can be felt on palpation. If this piece of tissue is too short or tight it can cause restriction of tongue mobility and as a consequence may affect the baby's ability to Breastfeed.

How to spot a Tongue-Tie

Some Tongue-Ties may be noted at the newborn examination undertaken usually by a Pediatrician or a Midwife with additional competency; others may be diagnosed whilst the mother and baby are still receiving post-natal care or when baby is older, by a Health Visitor, Breastfeeding Specialist or GP. The following clues may be present;

- Visible membrane or 'string' joining the tongue to the lower gums or the floor of the mouth.
- The tip of the tongue may be, 'flattened', 'heart –shaped' or 'notched' at the tip.
- The tongue doesn't lift up fully to the roof of the mouth particularly noticeable when baby is crying. It may also be 'squared-off' when lifting or sticking out rather than pointed.
- The centre of the tongue may be 'humped' or have a hollow shaped depression in it when lifting it.
- If you pass your clean finger under your baby's tongue you may feel a restriction or 'speed bump'. This may blanch if the tongue is lifted.
- The tongue may not be able to protrude beyond the lower gum, therefore not cushioning the nipple from pressure during Breastfeeding causing damage, compression or distortion of the nipple.

Reasons for treating Tongue-Tie

The treatment for Tongue-Tie is a simple procedure called a Frenulotomy (sometimes called Frenotomy or Frenulectomy).

Not all babies and children with Tongue-Tie need treatment, some may be fine without it. National guidance from the National Institute of Clinical Excellence (NICE guidelines) suggests that Frenulotomy is usually safe for young babies and could help with Breastfeeding problems. Frenulotomy may be recommended in babies up to 6 months of age if there are;

Difficulties with Breastfeeding for baby which may/may not include the following;

- Poor weight gain
- Prolonged jaundice
- Fractured frequent feeds
- Baby feeding 'all the time'
- Baby appearing unsatisfied after a feed
- Agitation and frustration whilst feeding
- Head-rocking or waving on approaching the breast for a feed
- Noisy clicking or lip noise whilst feeding
- Dribbling of milk during a feed
- Falling asleep prematurely during a feed
- Multiple attempts at latching or maintaining latch
- Use of expressed breast milk or artificial milk supplements
- Reflux like symptoms (coughing, back arching, hiccups, vomiting)

Difficulties with Breastfeeding for Mother may include;

- Distortion and or compression of the nipples resulting in pain, damage, loss of tissue
- Incomplete milk transfer by baby resulting in engorgement and/or mastitis
- Poor initiation and maintenance of maternal milk supply

The presence alone of a visible or anterior sub-mucosal (hidden/posterior Tongue-Tie) is not an indicator for treatment with Frenulotomy. Tongue mobility is the critical factor that affects Breastfeeding.

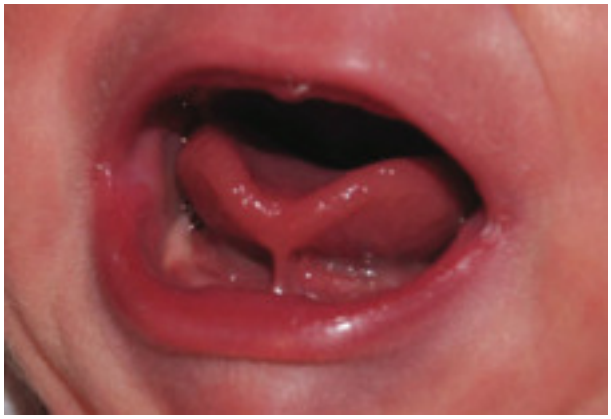
In the UK the National Institute for Clinical Excellence (NICE) operational guidance regulates our practice in the treatment of Tongue-Tie. NICE states that the procedure to divide a Tongue-Tie should be carried out only to assist mother and baby to Breastfeed more effectively. Frenulotomy should not be undertaken as a procedure for concerns that parents may have about their baby's future ability to speak, eat or for cosmetic reasons.

Types of Tongue-Tie

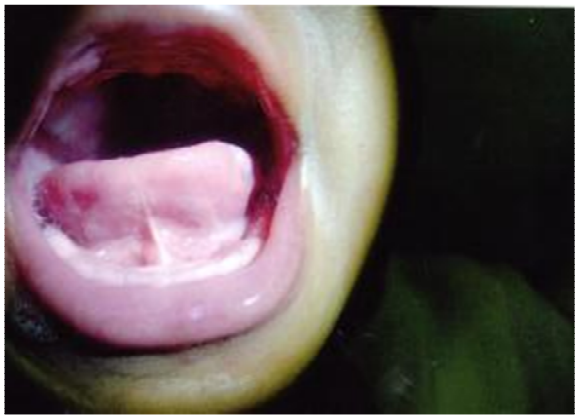
Anterior Tongue-Tie

In anterior Tongue-Tie, you can easily see a string of tissue (the frenulum) that attaches the tongue to the floor of the mouth. Anterior Tongue-Ties can be of varying degrees; from 100% where the frenulum is attached to the tip of the tongue i.e. 100% of the tongue is tethered (1) to just 25% of the tongue (2), causing the tongue to poorly elevate and 'squaring' the tip.

Oral examination is always required to determine how the Tongue-Tie affects the function of the tongue. Examinations will confirm if the tongue is able to elevate, lateralise and if it can protrude over the lower gums.



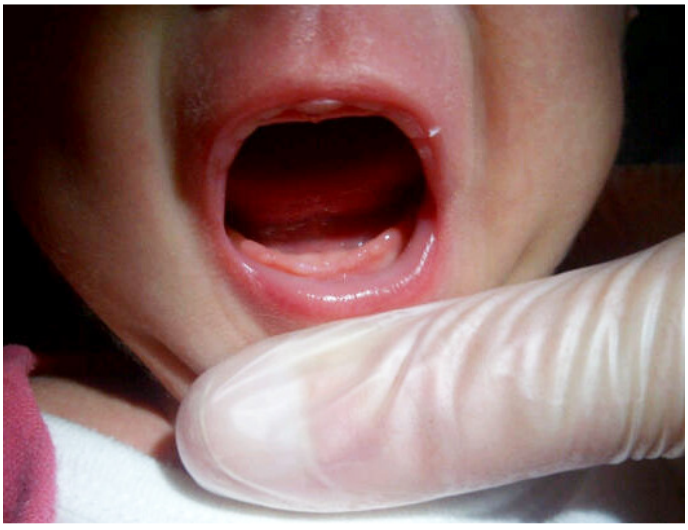
1. One hundred percent anterior tongue tie. *Katherine Fisher IBCLC*



2. Twenty five percent anterior tongue tie. *Katherine Fisher IBCLC*

Posterior Tongue-Tie

Posterior (sometimes called sub-mucosal or hidden) Tongue-Tie is where a wide band of tissue restricts the tongue's movement (3). The distance between the band of tissue to the tip of the tongue is shorter than usual. Elevation of the tongue is affected; protrusion and lateralisation can be assessed on oral examination.



3. Posterior Tongue-Tie. *Katherine Fisher IBCLC*

Frenulotomy procedure

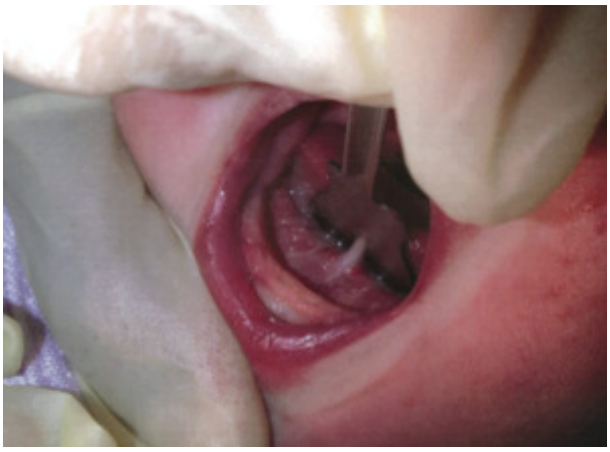
The procedure to divide a baby's Tongue-Tie is called Frenulotomy; a small piece of tissue under the baby's tongue is divided to enable optimum tongue movement and function, to help mother and baby to Breastfeed more effectively.

Following assessment of tongue mobility and a thorough and careful Lactation Consultation to assess readiness for the procedure is carried out. A decision is made to either divide the Tongue-Tie (Frenulotomy) or to offer on-going Breastfeeding support and lactation management strategies. Part of the initial consultation is to determine if there is an adequate maternal milk supply, which is important prior to division of any Tongue-Tie, and that baby has avoided any teat and flow preferences for expressed milk and/or artificial milk fed by bottles.

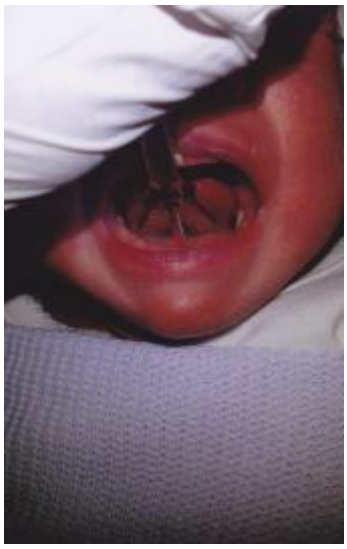
Ideally babies learning to Breastfeed should be finger fed with a syringe or Ng tube on the finger. This assists with achieving the optimum outcome from the procedure (see my other download called Your Breastfed Baby and Expressed Breast Milk).

Babies need to be hungry at the time of the procedure to encourage immediate Breastfeeding afterwards. The baby is wrapped or swaddled in a blanket to aid the assistant in keeping the baby still, the assistant holds the baby's head still with the chin to chest.

The instruments used are sterile and single use. The tongue is elevated with an instrument which isolates the frenulum and enables a clear view of the procedure site. This protects the blood vessels under the tongue and the tongue itself (4 and 5).

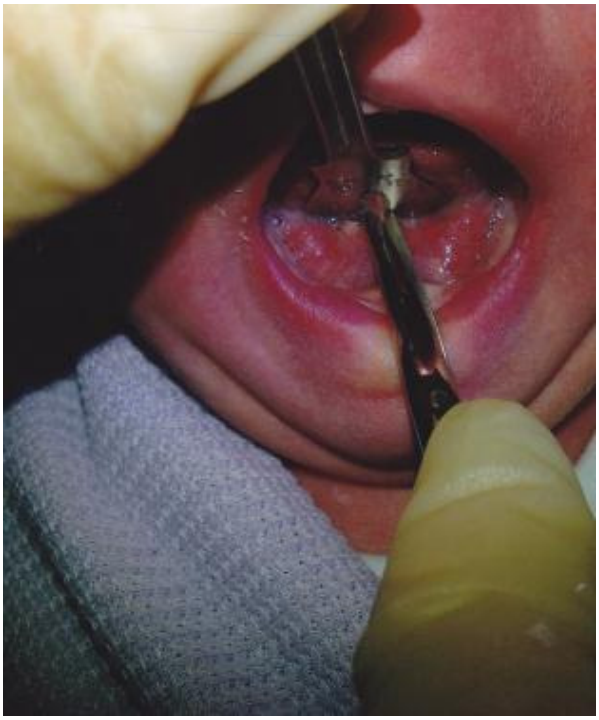


4. Isolation of posterior tongue- tie prior to division.
Katherine Fisher IBCLC



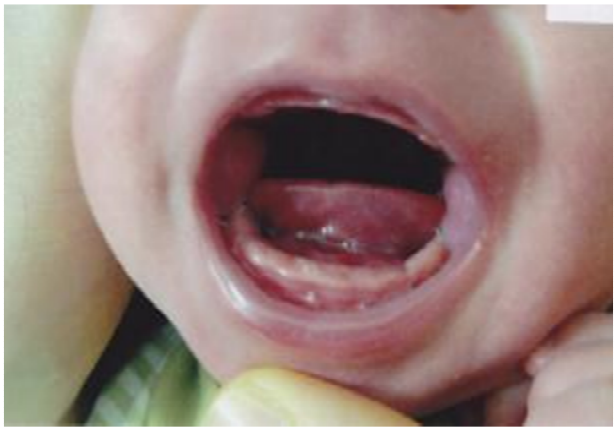
5. Isolation of anterior Tongue-Tie prior to division.
Katherine Fisher IBCLC

The frenulum is then divided usually with one snip using barely open blunt tipped curved strabismus scissors (6). The procedure is then completed by using closed scissors or blunt dissection using a finger. Gauze is applied to the wound and the baby is taken immediately back to the mother for immediate breast or finger feeding.



6. Frenulum division. *Katherine Fisher IBCLC*

A complete Frenulotomy is demonstrated by the formation of a diamond shaped wound under the tongue the size of this can vary from approximately 3-10mm (7).



7. Post procedure. *Katherine Fisher IBCLC*

Benefits, risks and alternative to Frenulotomy

The intended benefits of Frenulotomy are improved tongue mobility and as a consequence hopefully an improvement in Breastfeeding for both mother and baby.

The risks of Frenulotomy are; pain, bleeding, recurrence and late scarring. In helping parents to decide if Frenulotomy is the right choice for their baby it is important to carefully discuss these issues.

Pain

It is thought that the frenulum is an insensate area in that it doesn't have any nerve endings; therefore no pain relief is offered for the procedure unless the baby is over 8 weeks old, when the relevant dose of paracetamol suspension is given approximately 12-15 minutes before the procedure and teething gel acting as a local anaesthetic is applied under the tongue and on the frenulum at the time of the procedure. For babies under 8 weeks old the analgesia is the sucrose and other sugars in breast milk.

Babies experience the procedure in a variety of ways and very quickly settle once they are reunited with their mother and begin to Breastfeed. Some babies remain asleep during the procedure which takes about 30-60 seconds. Others are more awake or aware and cry more, but very quickly settle during a Breastfeed. The rapidly absorbed sugars present in breast milk are a very effective pain reliever.

Babies often cry because they are in unfamiliar surroundings, they need to be hungry at the time of the procedure and are wrapped in a blanket so that they may remain fairly still. For most babies being re-united with their mother and Breastfeeding post procedure helps them to settle within a few minutes. All mothers should receive immediate one to one Breastfeeding support following the procedure.

The action of the tongue during Breastfeeding assists in stopping any bleeding, and baby receives the pain relieving sugars in the breast milk.

Some babies are a little unsettled for 1 -2 days after the procedure, with occasionally the presence of a little blood stained saliva. It is important that mothers and babies go home with clear post procedure care plans including the correct dosage of paracetamol suspension according to the age and weight of the baby if required. It is also important that the parents are able to contact their practitioner at any time in the unlikely even of any complications arising or to discuss any feeding concerns.

Bleeding

The amount of bleeding following a Frenulotomy is normally just a few drops, some babies bleed a little more, but Breastfeeding helps to stop any bleeding. Tongue-Tie procedures should always be carried out by a practitioner who is competent at preventing trauma to the tongue and blood vessels during the procedure and able to deal with prolonged bleeding.

It is best practice for babies to have had Vitamin K prophylaxis following birth and prior to Frenulotomy in order that the practitioner can be more certain of their clotting status. If your baby hasn't had Vitamin K or artificial milk a risk assessment should be undertaken based on baby's age and type of delivery at the initial consultation.

The wound may bleed a little for 1-2 days after the procedure, which may stain baby's saliva a pinkish colour; this is normal and can be stopped by offering baby a Breastfeed.

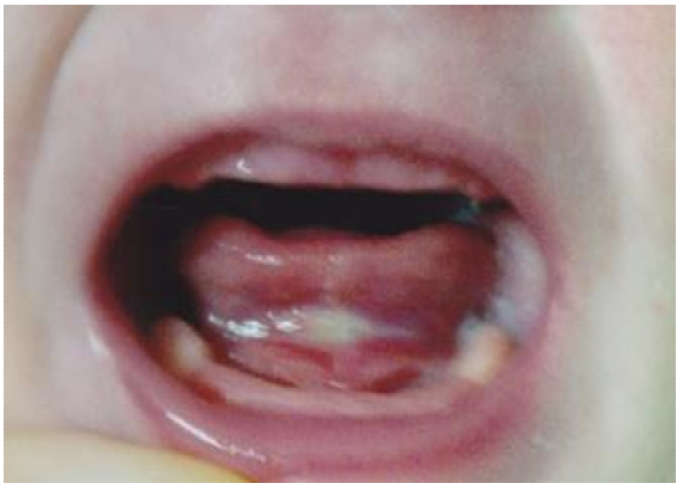
There may also be some black or grey flecks in baby's stools/nappy for a day or so, again this is normal and is a result of baby swallowing a little blood from the procedure.

It is best that mothers keep baby in scratch mittens or a sleep suit with mittens at the end of the sleeves for a couple of days following the procedure to prevent them accidentally poking the wound and causing it to bleed a little this is not of concern but may cause some parents to become unduly alarmed.

All mothers and babies should be given information on how to manage bleeding, by initially offering a Breastfeed, or applying firm pressure with your finger on the wound for 5 – 10 minutes. However, in the unlikely event of continued bleeding then the baby should be taken to A&E.

Recurrence and late scarring

Following Frenulotomy once the baby has fed and the bleeding has stopped, under the baby's tongue will be a dark red small diamond shape patch which can vary in size from approximately 4-10mm (8). This becomes white or yellow as it heals, this is normal healing of tissue in the mouth and is not an infection. Infection is not an evidenced risk of Frenulotomy.



8. Post Frenulotomy wound healing 3 days after procedure.
Katherine Fisher IBCLC

Recurrence of Tongue-Tie is not due to the membrane 'growing back', it is due the diamond shaped wound of the Frenulotomy adhering/sticking, scarring and then the resultant scar tissue contracting.

To ensure optimum surgical outcome of Frenulotomy is necessary to try and ensure that the wound heals without reoccurrence of the Tongue-Tie. As soon as the frenulum is divided the tissue is triggered to initiate a very rapid healing phase, it is however more desirable if the wound heals slowly to maintain the newly created additional tongue mobility.

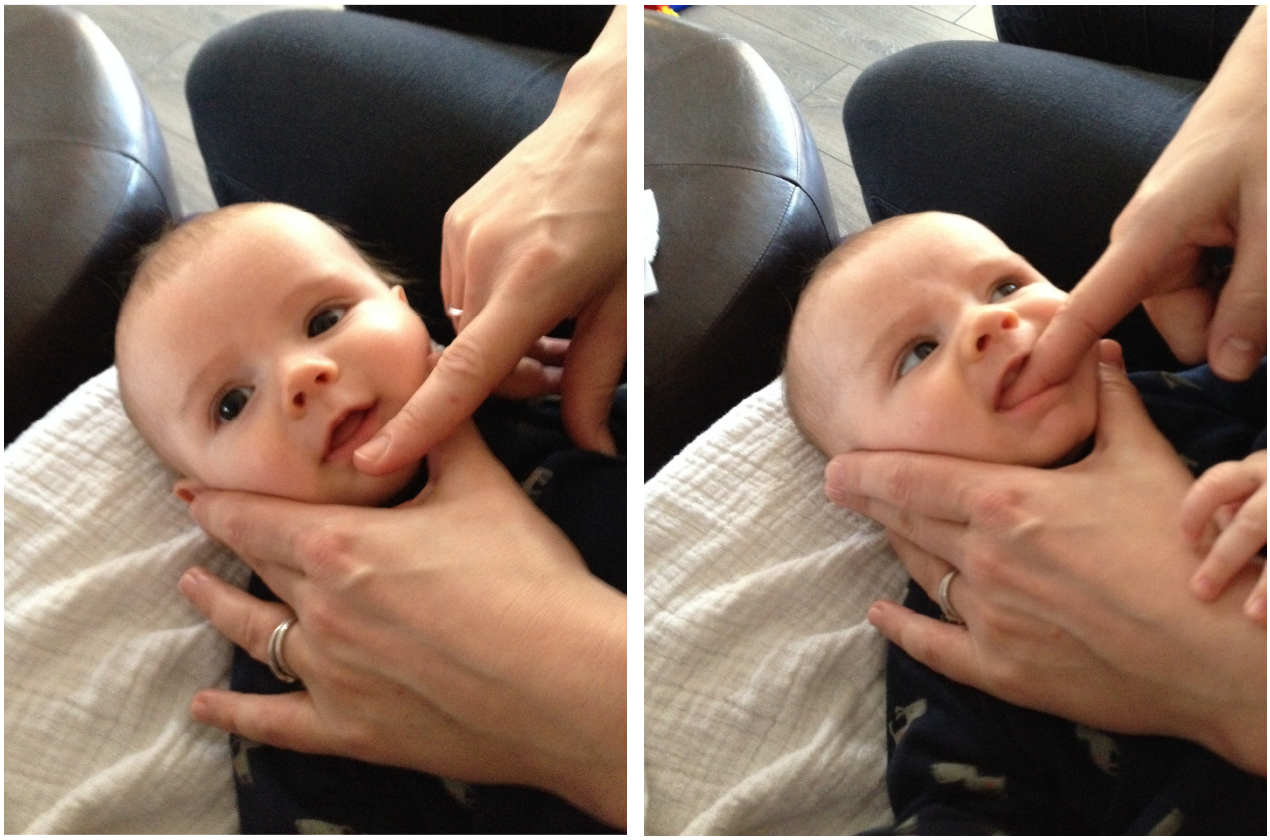
Optional post procedure wound care can assist in minimising reoccurrence of Tongue-Tie, a demonstration of which and can be seen in the video 'Care after lingual and maxillary lip ties have been revised for Breastfeeding infants' by Dr Lawrence Kotlow http://youtu.be/62pZw0LqYv8, further useful information can be found on Dr Kotlows website, http://www.kiddsteeth.com/.

In our recent study (soon to be published) of almost 70 babies who had Frenulotomy and subsequently followed a wound care management routine there were no recurrent Tongue-Ties. In this study although the parents reported the aftercare to be challenging their babies continued to be Breastfed for longer than the national average and no oral aversion reported.

Post procedure would care

1. In the 5 days following the procedure it is especially important that the baby is Breastfed 2-3 hourly during the course of each 24 hours. This often means waking the baby to ensure that they feed, if they are having supplements by syringe or bottle, it is important to ensure that they are Breastfed for at least 15-20minutes before the supplement is offered.

2. From the 48 hours after the procedure (or 24 hours after surgical revision), firm massage of the wound, (seen under the tongue as a yellow or white patch), twice a day will assist the wound to heal without adhesion. The massage should be done with a clean finger in a firm slightly circular motion (9), for 30 seconds twice a day before feeds. It will be necessary to massage the wound until the yellow/white patch disappears, this can take approximately 7 – 10 days. Teething gel appropriate to your baby's age can be applied immediately before massage. Dry the wound first with a clean muslin then apply the gel and wait 1-2 minutes before massaging.



9. Positioning for firm massage

3. When the yellow/white patch has disappeared and the wound is pink again, the massage required is in an up and down vertical smoothing, stretching and softening motion to help any scar tissue to remain soft and supple minimising the risk of any scar tissue contracting and causing a reoccurrence of the Tongue-Tie. This form of massage should be undertaken for a further 14-21 days and should not be uncomfortable for the baby.

The total after care takes about a month to complete.

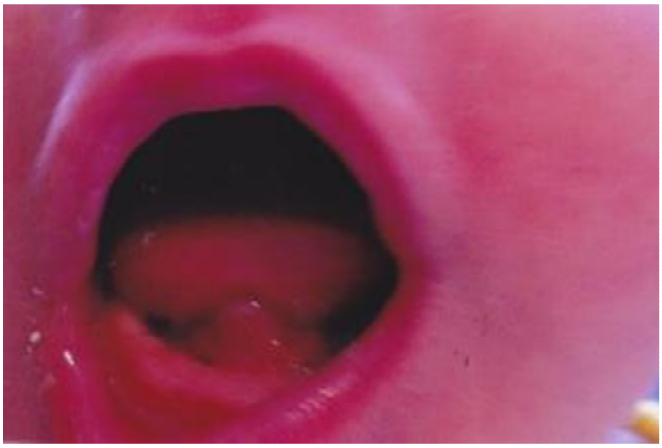
Post procedure follow up

All the patients should be seen again at day 5-7 and day 10-14 post Frenulotomy. At the follow up the wound should be reviewed for an adhesion (10) and Breastfeeding support should be provided. If an adhesion has occurred it is possible to disrupt the wound (push

apart the adhesions) (11) with a gloved finger. Sometimes the wound will bleed a little, which is easily stopped by offering the baby a Breastfeed, then further post procedure massage is advised for a further 7-10 days. Feeding plans should also be reviewed and revised at each follow up appointment.

For parents who have elected not to undertake the optional post Frenulotomy wound care, a reoccurrence of Tongue-Tie can occur (10). It may not be possible to resolve this with simple disruption with a gloved finger, and surgical revision may be required, if tongue mobility and Breastfeeding continues to be problematic.

10. Recurrence of Tongue-Tie, 16 days post-Frenulotomy.



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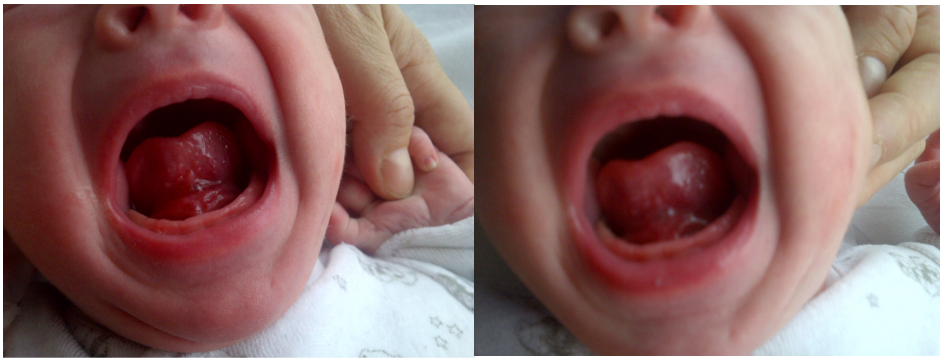


11. Post and pre- disruption. *Katherine Fisher IBCLC*

Alternatives to Frenulotomy

Alternatives to the procedure are:

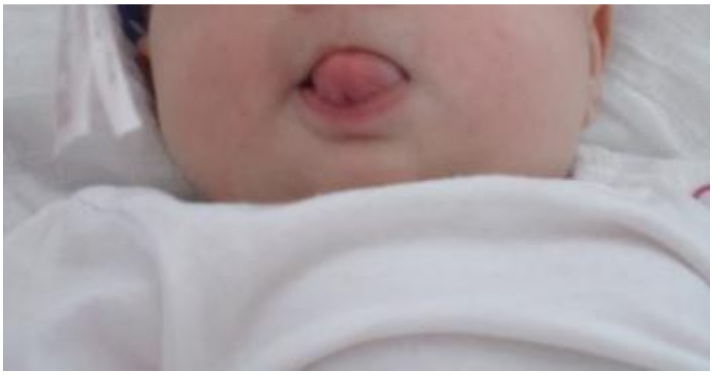
- Expressed Breast milk offered to the baby in a bottle, or by syringe or finger feeding. It can be difficult for some mothers to maintain and increase milk supply as their baby grows using a pump or hand expression alone.
- Some Tongue-Ties resolve spontaneously as baby grows they may break or reduce it by putting toys or other objects in their mouth.

- In the case of posterior Tongue-Tie, as baby grows, the tongue will grow from the point of tethering, but this takes 6-9 months and may continue to cause difficulty with Breastfeeding.

What to expect after Frenulotomy

Following the procedure some mothers and their babies find an immediate improvement in feeding. For others it will take longer, sometimes weeks or more for feeding to improve as the baby acquires new skills to Breastfeed. Whilst having a Tongue-Tie both mother and baby have acquired adaptations to their feeding to work around their difficulties. After the procedure, it can take some time for some mothers to gradually transition from the use of for example, nipple shields, finger or syringe feeding expressed breast milk or artificial milk, whilst their Breastfeeding gradually improves.

It is important that you view Frenulotomy as part of a plan to improve your feeding; it is not always an instant fix.



11. Six weeks post-Frenulotomy, optimum tongue mobility. *Katherine Fisher IBCLC*

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Acknowledgements

With thanks to Dr Lawrence Kotlow D.D.S, P.C., for providing the link to his video and website at http://www.kiddsteeth.com/ and the participants who took part in the photographs.