

BEDFORDSHIRE AND HERTFORDSHIRE PRIORITIES FORUM STATEMENT

Number: 57

Subject: Division of Ankyloglossia (Tongue Tie) for breast feeding infants and older children/ adults.

Date of Decision: June 2014

Date of Review: June 2017

Guidance

Criteria

For infants with feeding problems:

Division of the frenulum should only be conducted:

1. When under 3 months of age, AND
2. Where there are perceived breastfeeding difficulties, AND
3. As an outpatient procedure AND
4. It is usually expected that the patient will have been assessed by a health visitor or midwife with specialist expertise in breast feeding before first.

Prior approval will not need to be sought for outpatient procedures only in cases that meet these criteria. Individual funding requests would need to be made for infants outside of these criteria or if requesting day-case or inpatient surgery.

For older children or adults with speech problems

Surgery should only be considered for management of speech problems in adults or children with speech problems when:

1. The child is at least 5 years of age.
2. Speech is significantly and noticeably affected.
3. The speech sounds affected are consistent with tongue tie.
4. A Speech and Language Therapist has assessed the patient, and states that:
 - a. the speech problem is highly likely to be due to the tongue tie
 - b. the child is unlikely to grow out of the speech problem
 - c. conservative management eg speech therapy is unlikely to be successful
5. Other causes of speech abnormalities have been ruled out, for example audiological assessment and an assessment for a sub-mucous cleft.

Each case will need prior CCG approval from the Individual Funding Requests department.

The Human Rights Act has been considered in the development of this guidance.

Background

Ankyloglossia also known as Tongue Tie is a congenital anomaly characterised by an abnormally short lingual frenulum which may restrict mobility of the tongue. This condition varies from a very mild form in which the tongue is bound only by a thin membrane to a severe form in which the tongue is completely fused to the floor. Difficulties in breast feeding may arise where the condition is marked.

The prevalence is about 4%-5% in newborns (Messner et al., 2000; Ricke et al., 2005). However the severity and functional effects tend to decrease with time and oral growth. During the first 4 to 5 years of life, the oral cavity changes significantly in shape and size. Therefore, as the child grows, the severity of the tongue-tie lessens and the initial restrictions of lingual movement are diminished.

For patients with ankyloglossia, the most reported functional effects can include feeding problems in infants, in particular breast feeding and speech in older children and adults.

This Guidance applies to surgery to divide the frenulum or tongue tie

1. in infants under the age of 1 year, where the division is considered to address, perceived or actual difficulties in feeding
2. in older children or adults where there is concern about the effects on speech.

Surgery for difficulties in feeding in babies

The evidence base (National Institute for Health and Clinical Excellence Interventional Procedure Guidance 149) on the effectiveness of division of tongue tie is limited. Many tongue ties are asymptomatic and cause no problems, some babies may have difficulties in feeding.

As

- a. There may be other causes of breast feeding difficulties, and
- b. This procedure can be safely and effectively performed in the outpatients setting, the following is recommended.

Recommendations:

Division of the frenulum should only be conducted:

1. When under 3 months of age, AND
 2. Where there are perceived breastfeeding difficulties, AND
 3. As an outpatient procedure AND
 4. It is usually expected that the patient will have been assessed by a health visitor or midwife with specialist expertise in breast feeding before first
- Prior approval will not need to be sought for outpatient procedures only in these cases. Individual funding requests would need to be made for infants outside of these criteria or if requesting day-case or inpatient surgery.

Surgery for older children and adults where there are concerns regarding the speech

There has long been a common belief that if the tongue tip cannot move well due to ankyloglossia, it must affect speech. There is however no empirical evidence in the literature that ankyloglossia typically causes speech defects. On the contrary, several authors have disputed the belief that there is a strong causal relationship (Wallace, 1963; Block, 1968; Catlin & De Haan, 1971; Wright, 1995; Agarwal & Raina, 2003). In addition, there are very few other articles in the literature that address the effects of tongue-tie on speech.

Despite these reports and the lack of evidence, many professionals still believe that ankyloglossia is a common cause of speech problems. Certainly, children with ankyloglossia are often found to have no speech problems. There are no mechanical reasons why lingual restriction would have a major effect on speech in many patients, if one considers the type of sounds that are produced by the tongue tip.

Lingual-alveolar sounds (t, d, n) are produced with the top of the tongue tip and therefore, they can be produced with very little tongue elevation or mobility. The /s/ and /z/ sounds require the tongue tip to be elevated only slightly, but can be produced with little distortion if the tip is down. The most the tongue tip needs to elevate is to the alveolar ridge for production of an /l/. However, this sound can actually be produced with the tongue tip down and the dorsum of the tongue up against the alveolar ridge. Even an /r/ sound can be produced with the tongue tip down as long as the back of the tongue is elevated on both sides. The most the tongue needs to protrude is to the back of the maxillary incisors for production of /th/. All of these sounds can usually be produced, even with significant tongue tip restriction. This can be tested by producing these sounds with the tongue tip pressed down or against the mandibular gingiva. This results in little, if any, distortion.

In evaluating the effect of ankyloglossia on speech, therefore, it is important to focus on lingual-alveolar sounds (particularly /l/) and interdental sounds (voiced and voiceless /th/). Tongue-tie could be considered a contributing factor if the child cannot produce these sounds, even with the alternate placement noted above, and all other speech sounds are produced normally. Tongue tie may also be a bigger problem if there is oral-motor dysfunction as well.

It should be recognized that both ankyloglossia and speech problems commonly occur in children. Therefore it is not surprising that these conditions often occur together. A co-occurrence of two common problems does not mean that there is a causal relationship, however. Instead, when there are speech problems and ankyloglossia, this may be a co-incidence and other causes for the speech problems should be considered.

It is therefore recommended that frenulectomy is only considered as part of the management of speech problems when:

1. The child is at least 5 years of age.
2. Speech is significantly and noticeably affected.
3. The speech sounds affected are consistent with tongue tie (see above)

4. A Speech and Language Therapist has assessed the patient, and states that
 - a. the speech problem is highly likely to be due to the tongue tie
 - b. the child is unlikely to grow out of the speech problem
 - c. conservative management eg speech therapy is unlikely to be successful

References

National Institute for Health and Clinical Excellence. Interventional Procedure Guidance 149: Division of ankyloglossia (tongue-tie) for breastfeeding, December 2005.

Block, J. R. (1968). The role of the speech clinician in determining indications for frenulotomy in cases of ankyloglossia. *NY State Dental Journal*, 34(8), 479-481.

Fitz-Desorgher, R. (2003). All tied up. Tongue tie and its implications for breastfeeding. *Practicing Midwife 2003*, 6(1), 20-22.

Messner, A. H., Lalakea, L., Aby, J., Macmahon, J., & Bair, E. (2000). Ankyloglossia: Incidence and associated feeding difficulties. *Archives of Otolaryngology-Head and Neck Surgery*, 126(1), 36-39.

Ricke, L. A., Baker, N. J., Madlon-Kay, D. J., DeFor, T. A. (2005). Newborn tongue-tie: Prevalence and effect on breast-feeding. *Journal of the American Board of Family Practice*, 18(1), 1-7.

Human Rights and Equality Legislation has been considered in the formation of this guidance.

Appendix 1. Hazelbaker Assessment Tool for Lingual Frenulum Function (for infants under 1)

Appearance Items	Function Items
Appearance of tongue when lifted	Lateralization
2: Round or square	2: Complete
1: Slight cleft in tip apparent	1: Body of tongue but not tongue tip
0: Heart- or V-shaped	0: None
Elasticity of frenulum	Lift of tongue
2: Very elastic	2: Tip to mid-mouth
1: Moderately elastic	1: Only edges to mid-mouth
0: Little or no elasticity	0: Tip stays at lower alveolar ridge or rises to mid-mouth only with jaw closure
Length of lingual frenulum when tongue lifted	Extention of tongue
2: >1 cm	2: Tip over lower lip
1: 1 cm	1: Tip over lower gum only
0: <1 cm	0: Neither of the above, or anterior or mid-tongue humps
Attachment of lingual frenulum to tongue	Spread of anterior tongue
2: Posterior to tip	2: Complete
1: At tip	1: Moderate or partial
0: Notched tip	0: Little or none
Attachment of lingual frenulum to inferior alveolar ridge	Cupping
2: Attached to floor of mouth or well below ridge	2: Entire edge, firm cup
1: Attached just below ridge	1: Side edges only, moderate cup
0: Attached at ridge	0: Poor or no cup
	Peristalsis
	2: Complete, anterior to posterior
	1: Partial, originating posterior to tip
	0: None or reverse motion
	Snapback
	2: None
	1: Periodic
	0: Frequent or with each suck

Significant ankyloglossia is diagnosed when appearance score total was 8 or less and/or function score total was 11 or less.