



Ankyloglossia (tongue tie) in newborn

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Introduction

- Tongue is an important oral structure that affects speech, position of teeth, nutrition, swallowing ,periodontal tissue.
- Ankyloglossia (tongue-tie) limits the range of motion of the tongue, impairing the ability to fulfill its functions.

Introduction

- Frenum, connects a moveable part to a fixed
- In ankyloglossia, frenum has an anterior attachment and may be unusually short causing virtual adhesion of the tongue tip to the floor of the mouth

Introduction

- Ankyloglossia is a common congenital anomaly that is usually detected soon after birth. It is characterised by partial fusion or in rare cases, total fusion of the tongue to the floor of the mouth due to an abnormality of the lingual frenulum (Kummer, A. 2005, Dec 27)

Incidence

- Incidence varies from 1.7-4.8‰ (Deshmukh V. Ankyloglossia. Pediatric Oncall [serial online] 2007 [cited 2007 December];4.
- Male/ female ratio is 3:1, with no racial predilection
- Assoc. with syndromes like Opitz syndrome. Oro-facial-digital syndrome, Beckwith-Wiedemann syndrome etc.

Etiology

During early development, the tongue is fused to the floor of the mouth. Cell death and resorption free the tongue, with the frenulum left as the only remnant of the initial attachment.

Tongue-tie is the result of a short fibrous lingual frenulum or a highly attached genioglossus muscle (Messner AH, Lalakea LM, Aby J, Macmahon J, Bair E. Ankyloglossia: Incidence and associated feeding difficulties. Arch Otolaryngol Head Neck Surg 2000;126:36-9)

Classification of ankyloglossia

Classification of ankyloglossia	Range of free tongue*
Normal	>16 mm
Class I: Mild ankyloglossia	12-16 mm
Class II: Moderate	8-11 mm
Class III: Severe	3-7 mm
Class IV: Complete ankyloglossia	<3 mm

*Free-tongue is measured from the insertion of the lingual frenum into the base of the tongue to the tip of the tongue

Complications

- Feeding problems-approx 25% of newborns with ankyloglossia have feeding problems. As the child grows older, he may have difficulty moving a bolus in the oral cavity and clearing food from the sulci and molars. This leads to chronic halitosis and dental decay
(Ankyloglossia: To clip or not to clip? That's the question. The ASHA Leader, 10 (17), 6-7, 30)
- Dentition causes a pulling effect on the gingiva away from the teeth and even cause a mandibular diastema. Usually occurs after 8-10 years

Complications

- Cosmetics- looks abnormal and tongue has a forked or serpent look
- Speech- usually /l/ sounds and interdental sounds like /th/ are affected because of the restricted move of the tip

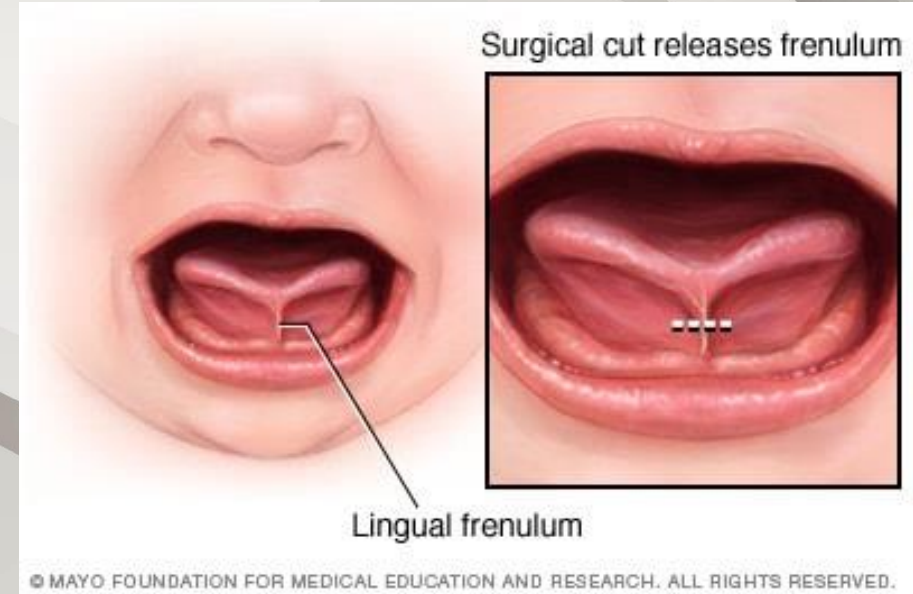
Treatment

- 1.Frenotomy technique
- 2.Frenectomy technique

Treatment

1. Frenotomy technique

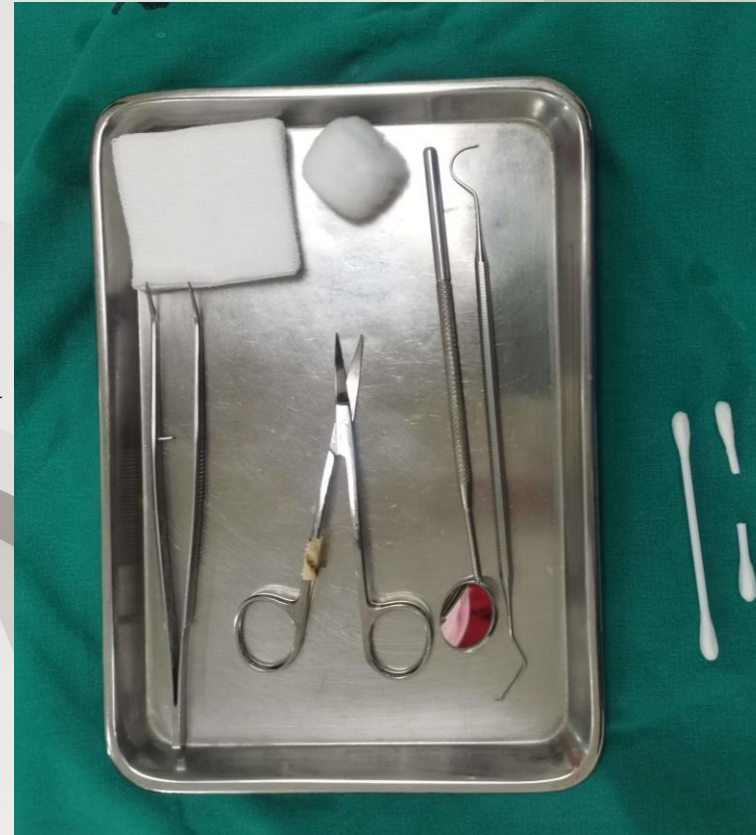
- Defined as the cutting or division of the frenum
- May be accomplished without LA and with minimal discomfort to the infant
- The parent or an assistant hold and stabilises the head, infant is placed supine with the elbows held securely close to the body



Treatment

1. Frenotomy technique

- The tongue is lifted gently with sterile gauze and stabilised exposing the frenum. This may be achieved by the placement of 2 gloved fingers of the clinician's left hand placed below the tongue upward and toward the palate and exposing the frenum



Treatment

1. Frenotomy technique

- The incision begins at the frenum's free border and proceeds posteriorly, adjacent to the tongue. This is necessary to avoid injury to the more inferiorly placed submandibular ducts in the floor of the mouth
- Each cut provides some release, allowing improved retraction and visualization for subsequent cuts.

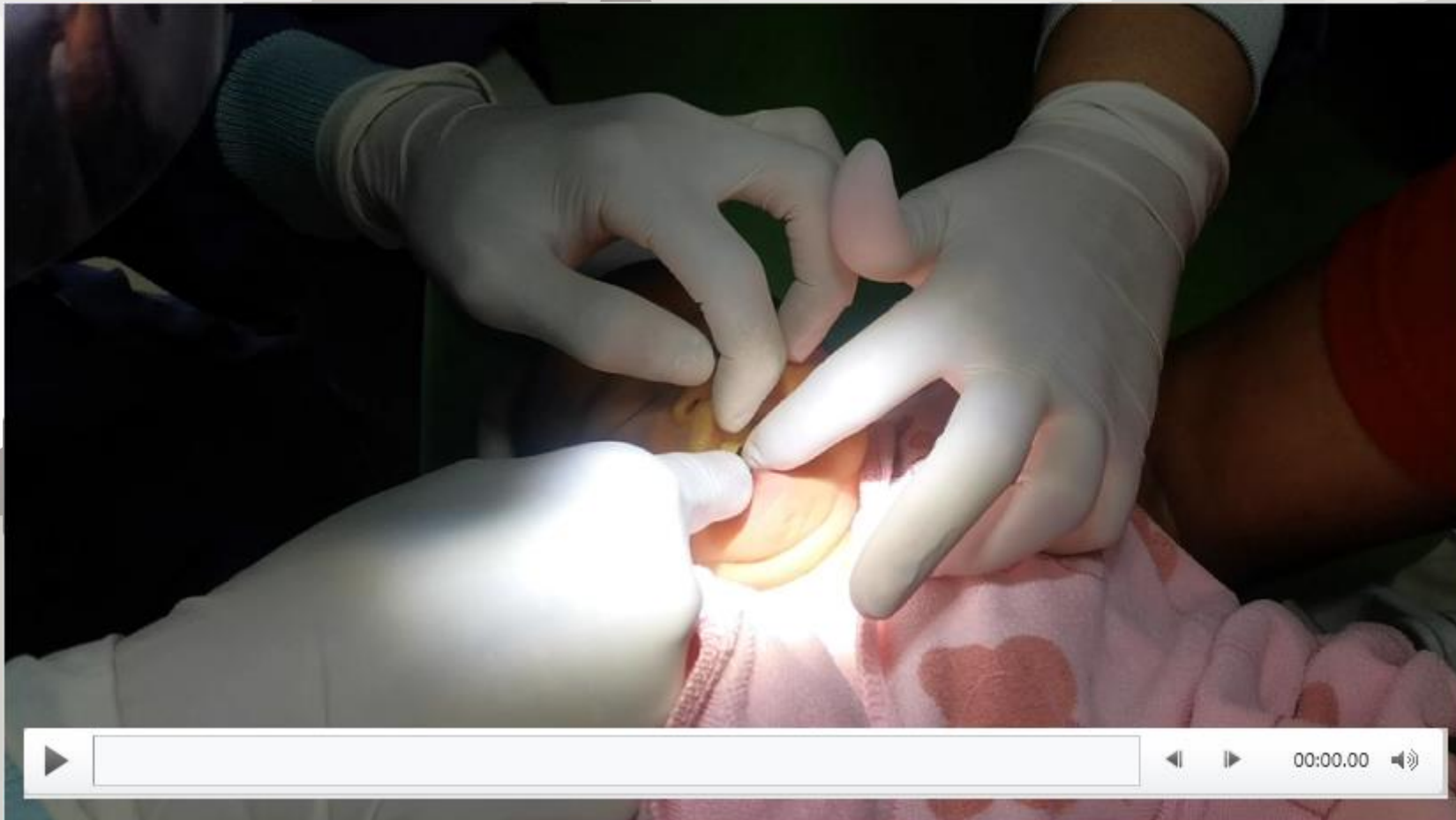
Treatment

1. Frenotomy technique

- Crying usually limited to the time of restraining
- Feeding may be resumed immediately and acetaminophen may be used for pain control
- Antibiotics not necessary
- Follow up in 1 to 2 weeks should show complete healing of the incision

Treatment

1. Frenotomy technique



Treatment

2.Frenectomy

- Defined as the excision or removal of the frenum
- Preferred procedure for patients with a thick and vascular frenum where severe bleeding may be expected, and in some cases, reattachment of the frenum by scar tissue may occur.
- Procedure in young children performed under GA. in older children and adults under LA
- Wound is sutured

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Thank
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