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ANKYLOGLOSSIA – CASE REPORT

Maxillofacial Surgery

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ABSTRACT

Tongue tie or ankyloglossia is a developmental anomaly of the tongue, in which the tip of tongue cannot protrude beyond the lower incisor teeth because of short frenulum linguae, often containing scar tissue. It is characterized by an abnormally short, thick lingual frenum resulting in limitation of tongue movement. It can be categorized into 2 types- Total ankyloglossia and Partial ankyloglossia. Ankyloglossia can affect feeding, speech, and oral hygiene as well as have mechanical/social effects. This article reports a case of ankyloglossia which was surgically treated with uneventful healing and good patient satisfaction.

KEYWORDS

ankyloglossia, lingual frenulum, tongue tie, speech, surgical, frenectomy.

INTRODUCTION:

The tongue is an important oral structure that is responsible for speech, swallowing and positioning of the teeth. Tongue tie or ankyloglossia is a developmental anomaly of the tongue characterized by an abnormally short, thick lingual frenum resulting in limitation of tongue movement. Etymologically ankyloglossia comes from a Greek word ankylose- "crooked", glossa- "tongue". It can be categorized into 2 types. Total ankyloglossia is rare and occurs when the tongue is completely fused to the floor of the mouth. Partial ankyloglossia is variable and encompasses the remainder of the cases. The incidence of tongue tie varies from 0.2% to 5%. Studies have shown a significant predilection for male child. This may also occur with increased frequency in various syndromes including Smith-Lemli Opitz syndrome, Orofacial digital syndrome, Beckwith Weidman syndrome, Simpson-Golabi-Behmel syndrome and X linked cleft palate. Ankyloglossia can affect feeding, speech, oral hygiene as well as have mechanical/social effects When the tongue is retruded it causes blanching of the soft tissue and also exerts excessive force on the mandibular anteriors. The lingual frenum may cause midline diastema in lower central incisors. Ankyloglossia can also prevent the tongue from contacting the anterior palate, leading to a retained infantile swallow, resulting in an open bite deformity.

This paper reports surgical management of ankyloglossia in young male patient who had severe restriction of their tongue movements.

Case report:

A 35-year-old male patient reported to the Department of oral and maxillofacial surgery, with complaint of difficulty in complete protrusion of the tongue. Slurred speech and difficulty in tongue movement

On Intraoral Examination

clinically the patient was diagnosed with class II ankyloglossia by utilizing Kotlow assessment. patient advised Surgical frenectomy of the lingual frenum. The patient was informed about the treatment procedure and informed consent was obtained.

Under local anaesthesia bilateral lingual nerve block and infiltration done. The tongue is grasped with traction suture at the tip of the tongue. here two haemostats were used one on upper margin and another on lower margin after stretching the excess attachment of frenum to the ridge is cut and released then a transverse incision is made between ventral aspect of tongue and caruncle of submandibular duct. Sectioning of some fibres of the genioglossus muscle yield greater degree of freedom.

Diamond-shaped defect is closed with interrupted sutures. Postoperative pain is managed by analgesics and oedema controlled by steroids. Patient advised for massage and moment of the tongue in all directions regularly and also for speech therapy

The patient was instructed to return for follow up appointments at 1week, then monthly for 3 months and subsequently every 6months. No scar formation observed during the follow-up period.



Figure 1: preoperative photograph
Figure:2 markings and traction suture
Figure :3 using two haemostats

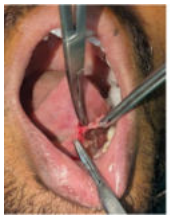

Figure:4 excision of excess attachment
Figure:5 Diamond-shaped defect
Figure 6 interrupted suturing

DISCUSSION

Ankyloglossia is a rare congenital oral anomaly that causes difficulty in breast feeding and speech articulation. This anomaly is characterized by the attachment of the tongue to the floor of the mouth. The condition is the result of a failure in cellular degeneration leading to a much longer anchor between the floor of the mouth and the tongue. Ankyloglossia represents a typical interdisciplinary problem concerning different specialties in dentistry. In many individuals ankyloglossia is asymptomatic and may resolve spontaneously.

Therefore, the surgery for ankyloglossia should be considered at any age depending on patient's history of speech, mechanical and social difficulty. Surgical techniques for the therapy of tongue-ties can be classified into three procedures.

Frenotomy is a simple cutting of the frenulum (of neonates). Frenectomy is defined as complete excision, i.e., removal of the whole frenulum (at or after 6 months of age).

Frenuloplasty involves various methods to release the tongue-tie and correct the anatomic situation.

In addition to surgical intervention, laser and electrocautery are also being used for treating ankyloglossia.

The cases presented in this paper were treated with transverse-vertical release frenectomy which resulted in good treatment outcome and patient satisfaction with improved tongue movements and correction of speech problems.

Post-operative exercise following tongue-tie surgery were not intended to increase muscle-strength, but to:
I) Develop new muscle movements, particularly those involving tongue-tip elevation and protrusion, inside and outside of the mouth, ii) Increase kinaesthetic awareness of the full range of movements the tongue and lips can perform, iii) Encourage tongue movements related to cleaning the oral cavity, including sweeping the insides of the cheeks, fronts and backs of the teeth, and licking right around both lips

Table: 1 Kotlow's Classification Based On Free Tongue

CLASSIFICATION OF ANKYLOGLOSSIA	
Normal	>16mm
Class I Mild ankyloglossia	12-16mm
Class II Moderate ankyloglossia	8-11mm
Class III Severe ankyloglossia	3-7mm
Class IV Complete ankyloglossia	< 3mm
*Free-tongue is measured from the insertion of the lingual frenum into the base of the tongue to the tip of the tongue	

CONCLUSION:

If severe/complete ankyloglossia is present in adults there is usually an obvious limitation of the tongue protrusion, elevation and speech problems. Optimal management of tongue tie includes timely and appropriate surgical intervention followed by speech therapy if required, ultimately delivering pleasing results, in a shorter time than expected.

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