

My Words are Tied, So is My Tongue - A Case Study of Ankyloglossia

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Abstract: *Tongue tie or Ankyloglossia is a congenital anomaly characterized by a very short frenulum that literally glues the tongue to the floor of mouth. An unusually thick band extending from undersurface of tongue to floor of mouth or labial gingiva is often recovered. This represents a short frenulum. This poses problems in daily life of the affected person in the form of speech difficulties, deglutition issues etc. This article reports a 9 year school going boy presenting to the opd with difficulty in speech. The case was successfully treated and followed up.*

Keywords: lingual frenulum, tongue tie, Ankyloglossia

1. Introduction

The term Ankyloglossia trace backs its origin from Greek words-*agkilo* and *glossos* meaning curved and tongue respectively (1). Ankyloglossia is a curved/crooked tongue that is glued to the floor of mouth by a piece of fibrous band –the frenulum linguae which is abnormally short to allow free movements of tongue. It is this band of tissue that determines the range of free movements of the tongue. A free tongue is that part of the organ between the attachments of frenulum linguae to its tip. A part from this distance, the thickness and elasticity of the band also determines the effect of the condition.

Kotlow's assessment is one of the commonly used diagnostic criteria in case of Ankyloglossia which is as follows

Class I: Mild Ankyloglossia: 12 to 16 mm,
Class II: Moderate Ankyloglossia: 8 to 11 mm,
Class III: Severe Ankyloglossia: 3 to 7 mm,
Class IV: Complete Ankyloglossia: Less than 3 mm.

Tongue tie is found rarely among 3-4 percent individuals and shows a male preponderance. (4) Reports suggest that mutations present in the TBX22 gene is involved in Ankyloglossia. Ankyloglossia is reported to be associated with Kindler syndrome, X linked cleft palate syndrome, Opitz syndrome and Van der Woude syndrome. (5)

2. The Case

A boy, 8 years of age presented to the surgical opd with complaints of improper speech. He says-my words are tied in his local language. We examined to find out that a thick band that extends from the undersurface of his tongue to the floor of mouth is the factor that ties his words. He goes to a regular school, scores good marks but unable to speak properly, sing and answer to his teachers questions. He had minor problems with deglutition, is underweight to his age. He reports salivation that hinders him while talking and drools out which makes him embarrassed.

On examination, the frenulum linguae was found to be thickened and short limiting tongue protrusion up to lingual surface of lower incisors and a diagnosis of Class 2

Ankyloglossia was made depending on Kotlow's criteria. (figure.1) There was no malocclusion or gingival recession. The case was posted for lingual frenulectomy by using scalpel method. The procedure was done and patient on review, showed marked improvement in tongue protrusion but the speech was not picking up that good. (figure.4) So, he was referred to a speech therapist and on follow up showed a marked fluency in speech, was able to sing his favorite song and has considerably increased the confidence level of this little boy.

3. Discussion

Even though tongue tie seems to be a relatively harmless condition, it poses great impacts in the day to day life of the affected individual starting from the very first day he is born. The tight frenulum prevents the tongue from getting over the lower gum and lips thereby affecting suckling of the breast and even the bottle feeding. This may lead to premature cessation of breast feeding and poor weight gain.

Inability to touch the roof of mouth may lead to problems in adult deglutition and the compensatory protrusion of mandible may lead to prognathism and maxillary hypo development leading to malocclusion and periodontal problems. (3)

When he starts to talk, speech difficulties starts arising making it difficult to pronounce consonants and sounds like "s, z, t, d, l, j, zh, ch, th, dg. (2)

As the Wharton's duct and many ducts of minor salivary glands open in the base and vicinity of frenulum linguae, the condition leads to a hyper salivation which may lead to dental hygiene problems.

The condition had utmost social impact in the life of the affected person that it may cause a social withdrawal and many other psychological issues.

Decision making in the management of Ankyloglossia depends on the severity of problem it presents with. A relatively asymptomatic case may be followed up conservatively but if it is affecting the normal life of the

individual or posing health issues it should be managed actively.

The most common procedure used to relieve tongue tie is a lingual frenulectomy where the frenulum is surgically divided using a scalpel or electro cautery or by a laser procedure. In some cases, speech therapy may be required after the procedure along with postoperative exercise session.

4. Conclusion

This case report aims at improving the awareness and knowledge about Ankyloglossia among surgical and dental specialties and emphasize on the hidden multiple dimensions of this problems which seems to be very harmless at the first glance. It also stresses on the multidisciplinary approach that had to be adopted for the successful outcome of the problem.

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Figures



Figure 1: Patient Showing the Fibrous Band



Figure 2: Patient Showing Improved Tongue Protrusion 2nd Week Post-Surgery