# Ankyloglossia, rare anomaly of tongue in adults: A case study

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## Abstract

Tongue-tie, or ankyloglossia, is poorly defined and involves a short, thick, fibrosed, or fixed lingual frenulum. Ankyloglossia has been reported to cause feeding difficulties, dysarthria, dyspnea, and social or mechanical problems. Ankyloglossia occurs in 1.7% of all neonates. As age advances, frenulum grows in length and normal function is established. Frenulectomy is recommended if it persists. We have also come across with the case of Tongue Tie in one of our patient. He is 19 years in age pursuing his graduation. He has got tongue tie which is persisting since birth.

**Keywords:** Ankyloglossia, frenulum, frenulectomy.

## Introduction

The tongue develops in relation to the pharyngeal arches in the floor of the developing mouth. The structures which contribute in the formation of tongue are paired lingual swellings, tuberculum impar and hypobranchial eminence (cranial part).[1] Incomplete fusion or lack of proper orientation will lead to numerous congenital anomalies of tongue. Tongue tie is a condition in which the midline sheath of tissue attached to the base of the tongue (lingual frenulum) is attached too forward on the tongue, causing restriction of tongue motion.[2,3] Ankyloglossia occurs in 1.7% of all neonates. As age advances, frenulum grows in length and normal function is established. Frenulectomy is recommended, if it persists. If the lingual frenulum extends to the tip of the tongue, a V-shaped notch may be visible. Tongue tie may cause feeding problems, tooth problems, and speech problems.

## Case report

A 19 year old boy presented to Dental Department at Seema Dental College & Hospital, Rishikesh, India with history of inablity to protrude the tongue fully. Local examination revealed presence of tongue tie. He had the tongue tie persisting in him since birth.The frenulum was smaller in length making condition known as Ankyloglossia. Inferior surface and tip of the tongue showed a notch. No history of such abnormality was present in his family members. Physical and mental health were normal. No other facial abnormality was observed. In present case, no speech impairment either in childhood or presently was found. Taste sensations were normal. Anomalous tongue movements (reduced) were observed when subject was asked to protrude

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his tongue. Right and left movement was normal. No digestive problem was found. (Figure 1,2)

**Ontogeny**

The lingual frenulum is a remnant of embryological tissue that is involved in craniofacial development. Normally, this tissue reduces in size to a short membrane after birth, which does not interfere with tongue movement or function. This does not happen in tongue tie, although the exact pathogenesis is not known. Maternal cocaine use has been suggested to increase the risk of developing tongue tie by up to threefold, however, no substantive evidence supporting this claim is available.

**Discussion**

Opinions range widely regarding the significance of ankyloglossia.Some investigators believe that the anomaly is rarely symptomatic while others believe that it may lead to host of problems, including infant feeding difficulties, speech disorders and various mechanical & social issues related to inability of tongue to protrude sufficiently.[4,5]

The American Academy of Paediatrics suggests the following grading system for tongue tie: Grade 1: is the attachment of the lingual frenulum to the tip of the tongue, in front of the alveolar ridge in the lower lip sulcus. Grade 2**:** is 2-4mm behind the tongue tip and attaches on or just behind the alveolar ridge. Grade 3: is the attachment of the lingual frenulum to the mid-tongue and the middle of the floor of the mouth and is usually tighter and less elastic.Grade 4: is essentially attached against the base of the tongue and is thick, shiny and inelastic. [6]

Our case belonged to Grade 2 type of tongue tie and presented no remarkable feature to cause any sort of problem in his day to day life. So surgical intervention was not required.

**Figure1: Showing reduced Frenulum**

**Figure2: Showing maximum protrusion.**

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