

www.jmscr.igmpublication.org

Impact Factor 3.79  
ISSN (e)-2347-176x



## “Psychosocial Factors Associated with Ankyloglossia – A Clinical Case Report”

Authors

**Khurshid Mattoo<sup>1</sup>, Nagaraj K<sup>2</sup>, Anchal Brar<sup>3</sup>**

<sup>1</sup>Assistant Professor, College of Dental Sciences, Gizan University

<sup>2</sup>Reader, Subharti Dental College, Subharti University

<sup>3</sup>Lecturer, Kalka Dental College, Chowdhury Charan Singh University

Corresponding Author

**Dr Khurshid A Mattoo**

Assistant Professor, College of Dental Sciences, Gizan University

Email: [drkamattoo@rediffmail.com](mailto:drkamattoo@rediffmail.com)

Work Attributed to Subharti Dental College and Hospital, Subharti University, Meerut

### ABSTRACT

*Ankyloglossia or tongue tie is a term that actually refers to a condition where the tongue remains more anchored to the bottom of the mouth than it should be, restricting its movement. Tongue besides being one of the strongest muscular organs of the body is also associated with important functions like mastication, hygiene and taste. Though these functions are discussed in details in the literature, its psychosocial role has been rarely discussed. This article in the form of a clinical case report discusses the psychosocial impact of the condition in an adult subject and the significance of knowing social history in such patients.*

**Keywords** - phonetics, emotional stress, denture stability, breast feeding, partial edentulism, oral play

### INTRODUCTION

The tongue is a complex organ with attributes like in speech, oral hygiene, proprioception and forms floor of the oral cavity, bears the organ of protection.

taste, assist mastication in adult and breastfeeding in Besides these known function, it is psychologically an infant, significant contribution to the articulation a very significant and potential factor that has

harmful effects when the tongue does not function properly.<sup>1</sup>

Mobility of the tongue is an important factor for fulfilling most of its functions. Tongue tie or Ankyloglossia refers to a congenital condition characterized by an abnormal lingual frenum which can limit tongue mobility and has different repercussion in a newborn baby as compared to the adult.<sup>2</sup>

This article in the form of a clinical report brings into light certain significant findings associated with ankyloglossia in adults. These features include edentulism in the vicinity of the condition, lack of oral play (for instance, poking the tongue out and wagging it about for fun) and psychosocial impact on such patients especially in relation to maintaining social relations.

### CLINICAL CASE REPORT

A young adult male patient in his early thirties, reported to the department of Prosthodontics seeking prosthesis for his missing mandibular anterior and a few posterior teeth. Medical history was non-contributory and dental history revealed that the patient had developed his existing edentulous condition due to the mobility of the teeth. Drug history was non-significant. Childhood history revealed that the patient was not breast fed by his mother and remained always underweight with the late introduction of solid food. As a boy the patient had experienced problems in mastication of food, the continuous dribbling of saliva and delayed learning of speech with deterioration in communication that led to his social withdrawal.

History also revealed low self-confidence since childhood, which persisted into adulthood.

Social history also revealed that since childhood the patient was labelled to be a severely reserved person who would not play much with other kids and would not communicate much even to his family members. Problems of adulthood besides speech, underdeveloped chin and poor oral hygiene also included emotional stress that was largely due to failed social relationships including his ex-spouse. Other affected aspects of social behaviour included patient's extreme sensitivity about personal appearance and failed premarital and marital relationship. General examination of the patient revealed a low body mass index and weak physical appeal. The patient's body weight was less in relation to his height. Intra oral examination revealed multiple carious teeth with Kennedy class IV partial edentulous situation in the mandible. All mandibular anteriors except the left sided canine were lost to periodontal disease with inconsistent bone loss. Plaque formation in relation to the lingual surfaces of the mandibular posterior teeth was evident. Examination of the tongue revealed a lack of mobility in the anterior, lateral and superior directions (Fig. 1). The movement of the tongue was clinically restricted within 7-8 mm in the anterior direction. The patient was unable to rotate the tongue in a circular manner. While protruding the tongue a characteristic 'W' shape groove was formed with a deep fissure formation in the midline of the tongue (Fig.2). On palpation the lingual frenum was prominent while protruding the tongue. Treatment plan for the patient included surgical correction of Ankyloglossia, oral prophylaxis,

endodontic treatment of maxillary left central incisor and mandibular left first premolar followed by a cast partial denture fabrication for the mandibular anterior teeth with single crown in relation to endodontically treated teeth. At the same appointment, diagnostic impressions were made and casts were mounted on a semi adjustable articulator. The patient was discharged with referral to an oral surgeon, periodontist and endodontist.



## DISCUSSION

Tongue tie in a newborn baby is not always apparent and may not be picked up until the baby has feeding difficulties or speech problems at the age of two or three.<sup>3,4</sup> Currently, there is no consensus regarding the precise definition of ankyloglossia and while several classification systems have been proposed,

none of the systems have been correlated to symptomatic severity.<sup>5</sup>

Symptoms in infants include slipping off the breast while feeding, sore nipples, mastitis and/or ducts, colic and slow weight gain, constant feeding.<sup>6,7,8</sup>

When ankyloglossia persists into adulthood, however, the symptoms may result in complex problems that include psychological problems (multifactorial in origin), oral hygiene maintenance, tooth loss, speech problems, and communication gap with family members, friends and relatives which in turn are interrelated to each other and one symptom may result in increasing the severity of other symptom. This, in fact, is classical to any combination syndrome where one problem results in increased severity of other.

The tongue is an important oral hygiene tool, especially to the lingual surfaces of the mandibular anterior teeth. Poor oral and dental hygiene because of limitations in lingual mobility or habitual incorrect tongue posture usually accompanies messy eating habits, with food debris remaining on teeth and lips, and causing dental caries. As is evident in this case the patient also had orthodontic problems that included malpositioned and rotated teeth, indicating space problems which in turn signal restricted mandibular arch development. Besides, the tongue plays a very significant role in oral stereognosis that allows us to perceive different shapes of objects. It is because of this ability one is able to detect harmful objects within or while having food. The tip of the tongue also is responsible to perceive irregularities on the lingual surfaces of the teeth. Interdental clogging of fibrous food can be easily perceived and removed by the tongue. When

the movement of the tongue is restricted laterally all these functions of protection and oral hygiene are hampered.

From childhood to the elderly, the tongue is used in a variety of social activities which is termed as oral play and has a crucial role in expressing human emotion.<sup>9,10</sup> Be it licking of an ice cream or playing a musical instrument like woodwind or oral foreplay like kissing, most of these activities rely on good tongue protrusion, elevation and rotation which in cases of tongue tie are impeded. When the tongue is restricted and cannot initiate oral foreplay before intercourse, the possibility of failing social relationships is understandable. Oral foreplay like kissing is not only significant physically, but also emotionally and biologically in marital relationships. Factors like libido, arousal, mating pattern, sexual response, hormone release, performance and satisfaction are integral to human copulation. Incompetent copulation affects the psychology of both individuals. Subjects with severe ankyloglossia suffer psychologically and induce emotional stress upon them.

Ankyloglossia in any form should be treated surgically. Significant improvement both subjectively and objectively have been obtained in subjects who have undergone surgical correction of the condition.<sup>11</sup>

## CONCLUSION

Ankyloglossia is an anatomical restriction of the tongue which can be easily corrected at any age. Awareness of the condition is the need of the hour because many people still relate such problems to superstitions and religious beliefs rather than

medical problems especially in the Asian subcontinent.

## REFERENCES

1. Ketty N, Sciuillo PA. Ankyloglossia with psychological implications. *ASDC J Dent Child* 1974; 41: 43-46.
2. Lawrence A. Kotlow. Ankyloglossia (tongue-tie): A diagnostic and treatment quandary. *Quintessence Intl* 1999; 30:259-262.
3. Paradise JL. Evaluation and treatment of ankyloglossia. *JAMA* 1990; 262: 2371.
4. Marmet C, Shell E, Marmet R, et al. Neonatal frenotomy may be necessary to correct breastfeeding problems. *J Hum Lact* 1990; 6:117-21.
5. Horton CE, Crawford HH, Adamson JE, Ashbell TS. Tongue tie. *Cleft Palate J* 1969; 6:8-23.
6. Wallace H, Clarke S. Tongue-tie division in infants with breastfeeding difficulties. *Int J Pediatr Otorhinolaryngol.* 2006 Jul; 70 (7): 1257-61.
7. Dollberg S, Botzer E, Grunis E, Mimouni FB. Immediate nipple pain relief after frenotomy in breast-fed infants with ankyloglossia. *J. Pediatr Surg.* 2006 Sep; 41 (9): 1598-600.
8. Ballard JL, Auer CE, Khoury JC. Ankyloglossia: Assessment, incidence, and effect of frenuloplasty on the breastfeeding dyad. *Pediatrics.* 2002 Nov; 110 (5): 63.
9. Lalakea ML, Messner AH. Ankyloglossia: The adolescent and adult perspective.

Otolaryngol Head Neck Surg 2003; 128 (5):

746-52.

10. Bosma J, Hepburn L, Josell SL, Baker K.

Ultrasound demonstration of tongue motions during suckle feeding. Dev Med Child Neurol 1990; 32: 223-29.

11. Lalakea ML, Messner AH. Ankyloglossia:

The adolescent and adult perspective.

Otolaryngol Head Neck Surg 2003; 128 (5):

746-52.