

Ankyloglossia – does it matter to us?

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Historical reference to tongue tie may be found beginning in biblical time: 'and the string of his tongue loosened and he spoke plain'. [Mark 7:35] (Lalakea and Messner, *Pediatr Clin N Am*, 50, 2003, 381). Tongue tie (more formally known as ankyloglossia) is a congenital anomaly characterized by an abnormally short lingual frenulum; which restricts the mobility of the tongue. The clinical significance of this anomaly and the best method of management is a subject of debate (Fanibunda, *Dental Update*, 25, 1998, 296). We sought to identify the problems faced by the dental and medical professionals during the clinical treatment of these patients and to know the attitude of the patient towards it.

Key words: ankyloglossia; lingual frenum; tongue tie

INTRODUCTION

The tongue is an important oral structure that affects speech; position of the teeth; periodontal tissue; nutrition; swallowing.^[3]

According to M. Lauren Lalakea, Anna H Messner ankyloglossia is uncommon but not rare. Incidence figures reported in literature vary widely from. 02% to 4.8%. Tongue tie occurs more commonly in males; with a male female ratio in the order of 3 to 1 and shows no racial predilection. Ankyloglossia also may occur with an increased frequency in association with various congenital syndromes including opitz syndrome and orodigito facial syndrome.^[5]

Douglas; Knesberg and Khosla concluded that a prominent lingual frenulum; although not limiting tongue movements, may dislodge the mandibular denture whenever the tip of the tongue is raised.

As per William N Williams, Claire M Waldron; the subject of tongue thrusting during swallowing and dental malocclusion continues to be a controversial topic; in cases of anterior open bite; it is common to observe the tongue within the dental opening during swallowing. Speech disorders; including lisping and general misarticulations; are frequently thought to be caused by tongue ti.^[1]

Majid Bissasu stated that tongue in its normal position can be used to assist the edentulous patient to record correct jaw relations; but unfortunately patients with ankyloglossia are not able to perform these movements.^[4]

Symptoms of tongue tie

1. Heart shaped tongue when raised or protruded out.
2. 'V' shaped notch at the tip of the tongue.
3. Patient usually extends the tongue tip beyond the upper gums.
4. Patient cannot move the tongue side to side.
5. Usually deviate while swallowing tablets.
6. Patients have problems while swallowing.
7. Digestive problems due to inability to chew properly.
8. Difficulty in licking an ice cream cone.

MATERIALS AND METHODS

The study was conducted as a survey, which included 100 dental professionals working in K.L.E.S.'s Institute of Dental Sciences; Belgaum. and 50 medical professionals including pediatricians; otolaryngologist and speech therapist, working in J.N.M.C Belgaum.

The study was conducted by a questionnaire, which was completed by the respondent, and the answers selected by them were tabulated.

Professionals participated in the study after giving an informed consent form. The questionnaire consisted of 10 questions; evaluating the knowledge of the professional; and problems faced by them during treatment of these patients during their clinical practice and how these patients perceive it.





RESULTS

The answers were selected maximum number of times in the chronological order by the professionals and were tabulated according to their frequency and have been shown in [Table 1] as percentage.

100 dentists and 50 medical professionals are surveyed about the opinion of ankyloglossia patients. The 100 dentists included all the branches of dentistry including the teaching staff and the post-graduate students, and 50 medical professionals including pediatricians; otolaryngologist and speech therapists.

The opinion expressed by the dentists are more concerned with the speech, to keep the mandibular teeth clean and that the patients are not comfortable in a group as they are psychologically affected.

However the medical professionals experienced difficulty in communicating with the patients and stated that most of the patients were not willing to undergo corrective measures.

DISCUSSION

According to the study conducted the most commonly faced problems by the dental/medical professionals were evaluated.

73% of the dentists experienced problems with the

border molding of the mandibular denture base; 85% of them experienced alteration in the speech. Usually the speech sounds that may be affected by impaired tongue movement included lingual sounds and sibilants such as t, d, z, s, h, n and l.

54% of the periodontists stated that accessibility of the lower lingual surfaces of the mandibular posteriors was difficult for oral prophylaxis and performing surgery.

34% of the orthodontist's experienced difficulty in placing lingual brackets and diastema between the lower central incisors is usually present. Making of impressions was also altered.

56% of the prosthodontist's failed to achieve a proper lingual sulcus and recording the jaw relation is also difficult as the denture would move even on the slightest movement of the tongue. Stability is compromised in these cases. Tooth preparation in these patients is usually difficult as the tongue cannot be retracted.

72% of the oral medicine radiology and diagnosis professionals felt that the oral cavity examination was not thorough thus leading to an incomplete examination and diagnosis at times.

30% of the conservative dentistry professionals felt that the isolation for the cavity restoration was difficult and use of restorative materials which require complete isolation was difficult.

46% of the oral and maxillo facial surgeon's state that these patients are usually not convinced for the surgical procedure; and patient co-operation was less.

60% of the pediatricians experienced that communication and examination of oral cavity was difficult. Children with ankyloglossia usually have a bad oral hygiene.

All the community medicine professionals feel that the general awareness about ankyloglossia is less and people usually don't reveal about the condition.

The problems faced by the medical professionals was that a considerable number of the population is not aware of tongue tie.

Pediatricians feel that children with ankyloglossia are difficult to manage as their restricted tongue movement makes their nature very irritable.

Speech therapists feel that the speech of the patient is affected and they can't pronounce most of the words correctly which leads to a low morale in these patients.

General surgery professionals treat these patients surgically and feel that there is noticeable change in the speech of the patients which usually they don't expect.

Table 1: Questionnaire form for survey

Questions asked	Dental	Medical
1. Interpretation of ankyloglossia?		
Abnormal condition outside the normal range of tongue	28%	18%
Congenital anomaly characterized by an abnormal short frenum	59%	60%
2. Clinical features?		
Speech problems	48%	24%
Malaligned lower anteriors	24%	40%
3. Problems faced by the patient?		
Difficulty in pronouncing words	49%	24%
Difficulty in keeping the oral cavity clean	29%	32%
4. How did you notice ankyloglossia?		
On clinical examination	66%	62%
Patient reported with it	19%	32%
5. Did the patient give any family history?		
No	78%	44%
Yes	19%	18%
6. Psychologically how these patients perceive it?		
Patients are not comfortable in a group	57%	50%
Patients don't have confidence	19%	22%
7. On functional examination what is affected the most?		
Speech	85%	60%
Swallowing	5%	26%
8. How many cases of ankyloglossia have you seen in the past 1 year?		
1-10	88%	82%
10-20	2%	6%
9. Were the patients willing for surgery?		
Yes	49%	26%
No	48%	69%

SUMMARY AND CONCLUSION

The study was conducted in a survey form and included 100 dental professionals and 50 medical pro-



professionals including pediatricians; otolaryngologist and speech therapist. The study was conducted by way of the questionnaire, which was completed by the respondent after giving an informed consent form.

The topic of ankyloglossia has endured a long history of professional discussion and yet there exists little qualitative information about it.

Dental specialists are frequently requested to evaluate the possible condition of tongue tie and some have conducted frenulectomies to provide more mobile tongue, when restricted movement exists.

The study depicts the knowledge and the problems faced by the dental and medical professionals. The patients develop psychological isolation because of speech problems and not being able to maintain the oral hygiene thus increasing the caries activity of the patient. This can be reduced by a simple surgical procedure and later speech therapy so that the patient can maintain good oral hygiene and enjoy a life in society with confidence.

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