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Anatomy

ANATOMICAL VARIATION IN THE TONGUE: ANKYLOGLOSSIA

R. Yasodai* Department Of Anatomy, Sri Ramakrishna Dental College And Hospital, Coimbatore. *Corresponding Author

B. Aswini Devi Department Of Anatomy, Sri Ramakrishna Dental College And Hospital, Coimbatore

ABSTRACT The word ankyloglossia is derived from greek word agkylos- "crooked", glossia- "tongue". Tongue tie is defined as tongue were abnormally short, thick, fibroses or fixed lingual frenulum . The tongue is too closely attached to the tip of the tongue or it is fully fused to the floor of the mouth. It causes feeding difficulties, dysarthria, dyspnea, social as well as mechanical problems and mental stress & illness. It occurs in neonates 1.7 % - 2 % . Frenulectomy is the procedure used to recommend ,if tongue tie is persists. He is 19 years aged, tongue tie which is present since from birth.

KEYWORDS : Ankyloglossia, Frenulectomy, Grade

INTRODUCTION

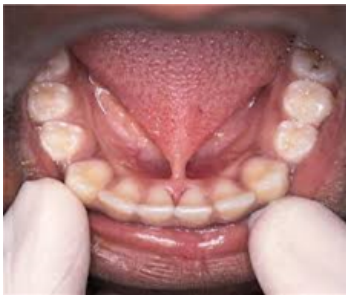
Tongue tie is other wise ankyloglossia derived from greek word. "tongue tie" is congenital condition , in this condition apical part of tongue maybe anchored to the floor of the mouth by an overdeveloped frenulum.It interferes with speech . Occasionally the tongue may be adherent ,to the palate is called ankyloglossia superior .According to J.langman etl 1981 reported that The development of the tongue develop from the pharyngeal arches , it developed from the floor of primitive pharynx phaygneal arch origin from as a mesodermal thickening in the lateral wall of the opposite side . The structures which associated to form tongue which are paired (2) lateral lingual swellings, one middle swelling tuberculum impar, behind the tuberculum impair, the epithelium proliferate to form a downgrowth is called thyroglossal duct ,which form the thyroid gland in later and then hypobranchial eminence is divided into cranial and caudal part alone. The lateral swellings moves forward and its fuse with tuberculum impar ,develops anterior 2/3of tongue derived from mandibular arch. Hypobranchial eminence (cranial part) forms the posterior 1/2 of the tongue is from 3rd arch and the caudal part of the hypobranchial eminence form epiglottis from 4th arch.

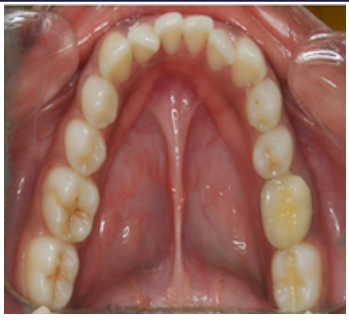
Developmental Anomalies of tongue is based on the incomplete fusion such as aglossia, hemiglossia, bifid tongue, tongue tie, lingual thyroid.[kotlow 1999,kupietzky 2005]

Tongue tie occurs by the presence of fibrous sheath of tissue(midline) is closely attached to the floor e or too forward on the tongue, which causes restricted movement in the tongue.

METHOLODY

The male 19 year old student came with the complaint struggling speaking difficulty, Anatomy Department at JKK NATARAJA Dental College & Hospital, TAMILNADU, India compare with other students in their classroom. Did oral external examination, no significant changes were find and intra oral examination, there is a presence of tongue tie. He had the tongue tie from his childhood. The lingual frenulum was short and its making condition known as Ankyloglossia [J.l paradise 1990,verdine 2013]. Tongue, inferior surface and tip was resulted a notch like appearance. There was no history of such abnormality, Physical and mental health were normal. facial apperanance was observed. during protrusion of tongue, the movement is restricted , the movement of Right and left was normal. [segal2007]





Causes:

The tongue tie exact pathogenesis was unknown, it is perisists due to embryological tissue[fibroses] ,that is responsible for craniofacial formation. Normally, the size of the tissue is reduced or lengthens the membrane after birth, it will not interfere with tongue movement or function. Sometimes Maternal cocaine or drug intake has been suggested to increases level of the risk of tongue tie.[caryllo's 2014]

DISCUSSION

The significance of tongue tieare wide in range. Some of the clinicians [M. obladen etl 2009] believe that the anomaly is rarely symptomatic and some others ,believe that it due to host of problems, including infant feeding difficulties, speech disorders and various mechanical & social issues. Resulted that inability of tongue causes difficulty protrusion .

The American Academy of clinical Pediatrics' states the following grading system for tongue tie [J.E wright etl all]: the level as follows

Level 1 result that the insertion of the frenulum to the tip or in front of the tongue alveolar ridges in the lower lip sulcus.

Level 2 results: attachment frenulum 2-4mm behind the tongue tip or it may attaches on or just behind the alveolar ridge.

Level 3: results insertion of the lingual frenulum to the middle of the tongue or also middle of the floor of the mouth. It is usually tighter and less elastic in nature.

Level 4 : frenulum attaches against the base of the tongue and it is thick, shiny and inelastic in nature.

In this case, it belongs to type 2 type , tongue tie has no remarkable feature, it will not happen no particle deformities. So, that no surgical procedure necessary.

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