

Title: Frenotomy - Indications or calculations?

Małgorzata Kotarska

Wroclaw Medical University, Poland

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Aim: The recent exponential increase in the incidence of tongue Frenotomy in neonates and infants is a cause for legitimate concern due to the lack of precise indications for the procedure determined based on the diagnosis and effects of a short frenulum of the tongue. On the other hand, there are known cases of the development of Obstructive Sleep Apnea (OSA) following ankyloglossia. However, since Frenotomy — like any surgical procedure — is fraught with the risk of potential complications, it is imperative to gather scientific evidence to justify the need, when and how it should be performed.

The aim of this paper was to: 1. determine whether a short frenulum of the tongue impairs eating and pronunciation, and whether it impairs the development of the craniofacial. 2. Determine the age of the patient at which a reliable diagnosis of the length of the frenulum of the tongue can be made and, after the procedure of its lengthening, the greatest clinical benefits can be achieved.

Material and methods: For the analysis we qualified original studies, narrative articles and systematic reviews concerning the subject of short frenulum of the tongue in generally healthy people of all ages.

Results: On the basis of the collected articles we proved that 1. The diagnostics of the length of the frenulum of the tongue is not systematized; there are no clear recommendations as to the type of surgery as well. 2. Complications related to the tongue Frenotomy are the more serious for the general health condition the younger the patient is. 3. A short frenulum of the tongue is related neither to the quality of food intake in the neonatal and infantile period nor to the development of the patient's normal pronunciation. 4. A short frenulum of the tongue results in morphological changes in the lower craniofacial region and the neck, such as: a) narrowing of the maxilla manifested by a reduced intercanine and intermolar dimension and an increased palatal height, b) a change in the position of the hyoid bone, which may be related to the development of OSA, c) an increase in the SNB angle and d) an increase in the lower facial height. 5. The relationship of the length of the frenulum of the tongue to its position and to malocclusions is unclear, so a short frenulum cannot be considered to be an etiological factor for the class II malocclusion; it can only be thought to contribute to the frequent opening of the mouth in infants, resulting in an open bite.

Conclusions: The results obtained allow us to conclude that, in the absence of a risk of OSA, the timing of tongue Frenotomy should be determined by the point at which the formation of the maxillary and/or mandibular skeleton allows the risk of skeletal class III and primary crowding to be recognized. Theoretically, this sets the lower age limit of indication for Frenotomy at approximately 4 years, which, however, due to the individual nature of the disorder, does not relieve from the obligation of an orthodontic consultation in every case of short frenulum of the tongue.

The aspect of the patient's respiratory disorders, which may be an absolute indication for tongue Frenotomy regardless of the patient's age, still requires research into the relationship between the length of the tongue frenulum with its position and its influence on the width of the skeletal bases and the position of the hyoid bone.

Biography

Dr. Małgorzata is a Teaching assistant and researcher at Wroclaw Medical University. Associated with Department of Dentofacial Orthopedics and Orthodontics and Department of Integrated Dentistry. Since the beginning of her professional career, she has been fascinated by orthodontics, especially interceptive treatment. Her planned and ongoing PhD thesis research revolves around early treatment, Moss matrix theory and the ideological search for a way to provide perfect skeletal pattern for growing patients.