



LINGUAL BRAKE ANALYSIS AND EVALUATION IN CHILDREN IN THE AMAZON FACULTY - IAES

Education

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ABSTRACT

The lingual brake is an important structure for the musculoskeletal growth of the baby's jaws, influencing the act of sucking, speaking and feeding. There is an alteration called ankyloglossia (Ankylos: Linked and Glossa: Tongue), defined as a congenital malformation that alters mobility and lingual function. Brake change occurs when a portion of the tissue that should have suffered apoptosis during embryonic development remains on the underside of the tongue, restricting its movement. The lingual brake is formed by a connective tissue rich in elastic fibers, lined with non-keratinized stratified paved epithelium, containing adipose cells, muscle fibers and blood vessels. Any anatomical or functional brake deficiency can have an impact on functions based on their severity. Its diagnosis is not difficult, as it is very visible and can be done through the "Tongue Test". Surgical removal of the brake is necessary when it causes gingival retraction, diastema, hindering orthodontic, speech therapist, prosthetic and aesthetic treatment. It is advisable to wait for the individual's growth process, especially between 6 months and 6 years of life. The treatment performed for this anomaly is the frenectomy, which consists in the complete removal of the brake insert. The objective of the present study was to conduct a research that evaluated the lingual brake of children, and the need for surgical treatment at the pediatric dentistry clinic at Amazon Faculty - IAES through a questionnaire. It was a cross-sectional, descriptive and observational study, which evaluated the lingual brake of children. Data were analyzed quantitatively and qualitatively using the statistical data program. The software used for data analysis was Epi Info version 7.2.2.6 for windows. It was concluded that of the 50 lingual brakes evaluated, 14% presented alteration, with a preference for females. It was clear the need for an early diagnosis, besides the need for a multidisciplinary team.

KEYWORDS

Ankyloglossia. Phrenectomy. Lingual brake. Surgery. Pediatric Dentistry.

INTRODUCTION

The lingual brake is an important structure for the baby's musculoskeletal development, directly influencing the act of sucking, speaking and feeding. (AZEVEDO et al, 2020).

The lingual brake it is rich in elastic fibers, covered by stratified non-keratinized squamous epithelium, contains fat cells, muscle fibers and blood vessels. According to Danelon (2020), its function is to support the tongue and help to limit its movement in different directions.

The studies by Messner (2020), state that the congenital malformation that modifies mobility and lingual function is defined as an alteration called ankyloglossia. According to the author, "over the past decade, there has been an exponential increase in the number of children diagnosed and treated with ankyloglossia in more affluent countries". (MESSNER et al, 2020).

The change in the brake occurs when a portion of the tissue that should have undergone apoptosis during embryonic development, remains on the underside of the tongue, preventing its movements (MARTINELLI et al., 2016).

METHODOLOGY

The present study, carried out at Facultad do Amazonas - IAES, was carried out after approval by the Research Ethics Committee of North University Center - UNINORTE, under number 177 448 19.9. 0000. 0010.

It was a cross-sectional, descriptive and observational study, where the lingual brake of children was evaluated.

The evaluation of the tongue was carried out in its 4 aspects: morphology, mobility, anatomofunctional evaluation and type of brake (braided, slight fissure in the apex and heart shape).

The following inclusion criteria were employed: The child who presented the lingual brake with the presence or absence of ankyloglossia where the guardian was aware. Exclusion criteria for both groups were those that did not fit the Inclusion criteria.

The data were presented by means of graphs and tables, where the simple and relative absolute frequencies were calculated for the categorical data. In the age analysis, as the normality hypothesis was accepted through the Shapiro-Wilk test, the mean and standard

deviation (Dp). When comparing clinical data in relation to gender, the chi-square test with Yates correction was applied, and in the impossibility of applying the Yates test, Fisher's exact test was used for tables 2 by 2 (VIEIRA, 2004).

The software used for data analysis was the Epi Info program version 7.2.2.6 for windows, which is developed and distributed free of charge by the North American Disease Control and Prevention Center - CDC (www.cdc.gov/epiinfo). The level of significance set in the statistical tests was 5%.

RESULTS

Of the 50 questionnaires evaluated regarding the distribution of sex frequency, a greater number of female children (60.0%) were contacted in relation to males (40.0%). Regarding the age of the children seen at the clinic, most were between 4 and 8 years old.

Table 1 shows the frequency of the results of the children's clinical data. Of the 50 children analyzed, 80% had a low socioeconomic profile. Regarding the duration of breastfeeding, 70% of children breastfed for 2 hours or more. According to the resting lips posture, 96% of the children had closed lips. As for the shape of the tip 86% of the tongue were rounded. It was noted that 16% of children suckled little and slept, loosened the nipple and clicked their tongue during sucking. It is seen that 20% of children had tired to breastfeed, 26% bit the nipple. 6% had a family history of cases with altered tongue brake.

Table - 1 Distribution According To The Frequency Of The Results Of The Clinical Data Of The Children Attended

Variables (n = 50)	fi	%
Socioeconomic profile		
Low	40	80,0
Medium	10	20,0
Time between breastfeeding		
1 hour or less	15	30,0
2 hours or more	35	70,0
Resting lips posture		
Half-open	2	4,0
Closed	48	96,0
Shape of the tip of the tongue		
Rounded	43	86,0
Heart shape	2	4,0
Small crack at the apex	5	10,0

Tiredness to suckle	10	20,0
Little breast and sleep	8	16,0
Bite the nipple	13	26,0
Family history	3	6,0
Tongue clicking during sucking	8	16,0

fi = simple absolute frequency; 95% CI = 95% confidence interval.

Source: the authors

Out of a total of 50 children evaluated, 14% had a tongue brake with abnormalities and 86% did not. Thus, the sample was composed of both sexes, female and male and divided into two groups: Research group (GP): composed of 7 children with alteration of the lingual brake and the Control Group (CG): composed of 43 children without alteration of the lingual brake.

CONCLUSIONS

The studies referring to the prevalence of the altered brake show variable results, for this study the total was 14%, diverging from the results found by Fujinaga et al., (2017), in which the total prevalence was 0.8%. However, the number of evaluations in the survey were different.

In general, boys seem to be more affected than girls. When verifying the distribution of the prevalence of ankyloglossia by sex, the results of this research differ from those obtained by Suter and Bornstein (2009), who found a predilection for males. In this research, there was a statistically significant difference related to the female sex for ankyloglossia.

It is concluded after the obtained results that of the 50 lingual brakes of the evaluated patients, 14% approximately presented some alteration in the lingual brake having predilection for the feminine sex. Unfortunately in this research there were no results in babies, therefore, in view of the data collected, the need for an early diagnosis was clear, aiming at the children's well-being, in addition to the need for a multidisciplinary team following the stages of diagnosis, family orientation, surgical intervention procedure and postoperative follow-up. that patient.

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