

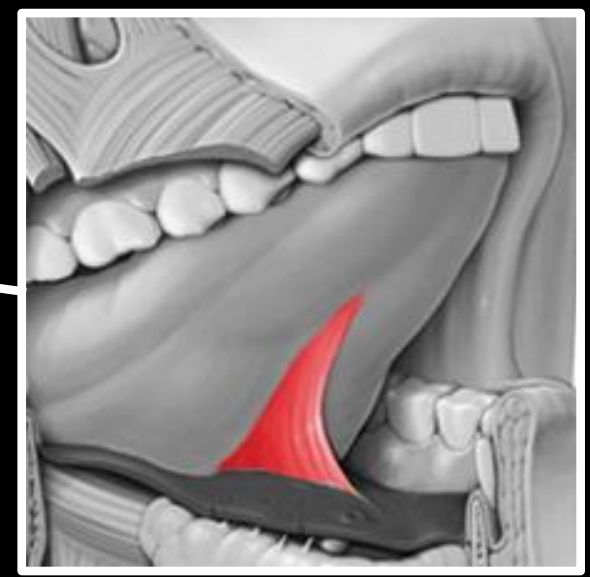
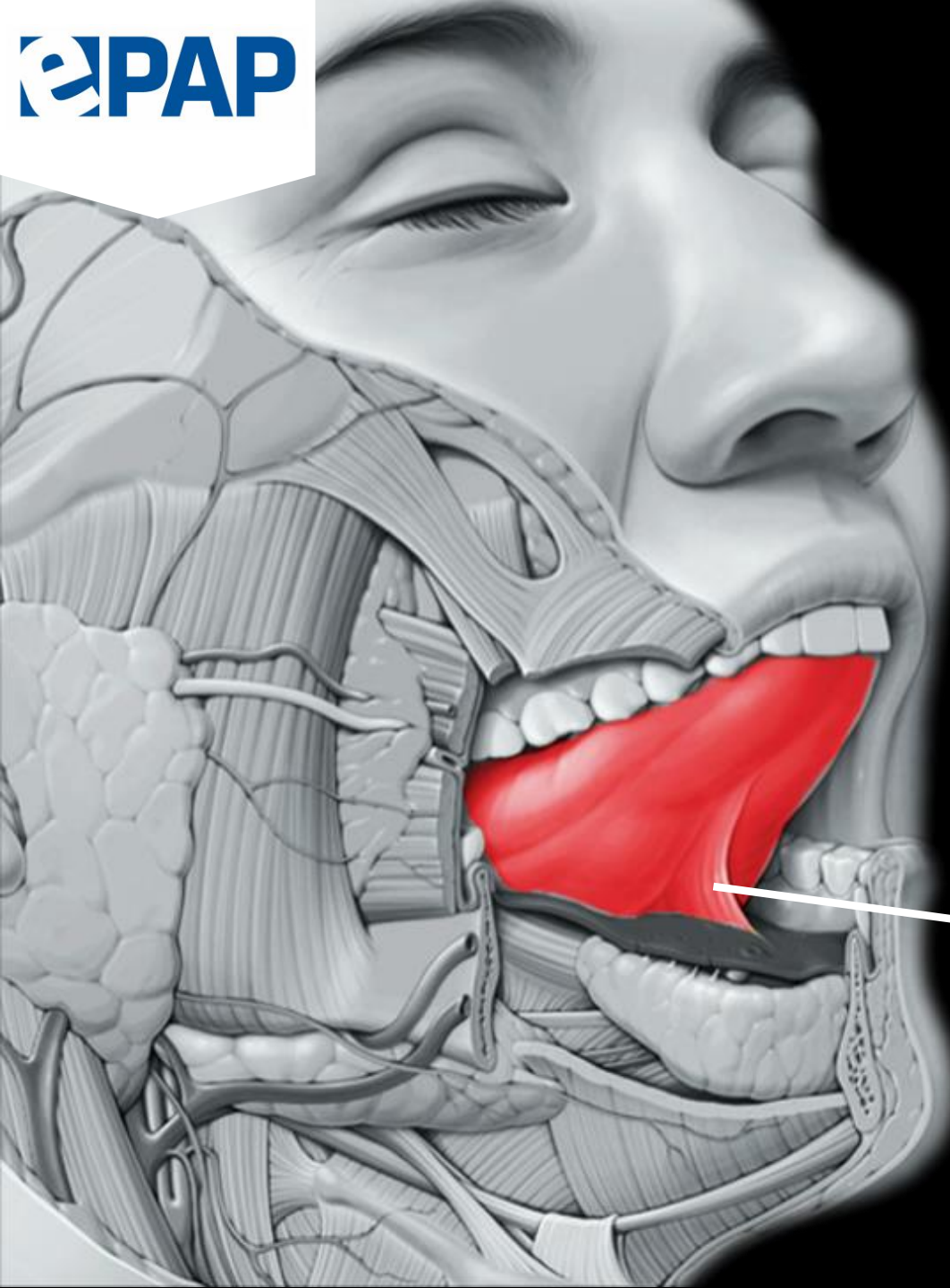


*Sejam Bem Vindos!*

12ª parte

# FRÊNULO LINGUAL

## Avaliação e condutas





## TODOS OS DIREITOS RESERVADOS

Todo o conteúdo desta aula, seja ele textual, gráfico ou de mídia digital constituem propriedade intelectual de Roberta Martinelli, exceto onde indicado em contrário.

- Não é permitido a reprodução total ou parcial desse conteúdo.
- Não é permitido fotografar e/ou filmar os slides.

# CONTEÚDO

- Anatomofisiologia da língua
- Importância da avaliação do frênulo lingual
- Avaliação do frênulo lingual em bebês
- Avaliação do frênulo lingual em crianças, jovens e adultos
- **Cirurgias e resultados**



# FRENOTOMIA



... é um procedimento cirúrgico no qual o frênulo lingual é cortado.



# FRENOTOMIA



A literatura recomenda realizar a **FRENOTOMIA** em bebês

- alguns autores relatam não haver necessidade do uso de anestésico;
- Outros recomendam anestesia tópica;
- Outros recomendam anestesia infiltrativa;
- Outros recomendam anestesia geral

# Resultados relatados na literatura

## The effects of frenotomy on breastfeeding

Roberta Lopes de Castro MARTINELLI<sup>1</sup>, Irene Queiroz MARCHESAN<sup>2</sup>, Reinaldo Jordão GUSMÃO<sup>3</sup>, Heitor Marques HONÓRIO<sup>4</sup>, Giédre BERRETIN-FELIX<sup>5</sup>

### A frenotomia lingual aumenta o número de sucções e diminui o tempo das pausas

	Grupo com alteração do frênulo lingual	Grupo controle	Análise estatística(≠ entre grupos)
<b>Número de sucções antes da cirurgia</b>			
Média com 30 dias de vida	19.36±13.02	55.76±21.00	<b>p= 0.005*</b>
<b>Número de sucções após a cirurgia</b>			
Média com 75 dias de vida	53.76±7.99	54.50±20.88	p>0.05
-----			
<b>Análise estatística (≠ entre momentos)</b>	<b>p&lt;0.001*</b>	p>0.05	
<b>Tempo das pausas antes da cirurgia</b>			
Média com 30 dias de vida	6.14±2.47	3.00±0.63	<b>p&lt; 0.001*</b>
<b>Tempo das pausas após a cirurgia</b>			
Média com 75 dias de vida	3.88±0.88	3.30±0.67	p>0.05
-----			
<b>Análise estatística (≠ entre momentos)</b>	<b>p=0.013*</b>	p>0.05	

\*diferença estatisticamente significante

# Resultados relatados na literatura

## The effects of frenotomy on breastfeeding

Roberta Lopes de Castro MARTINELLI<sup>1</sup>, Irene Queiroz MARCHESAN<sup>2</sup>, Reinaldo Jordão GUSMÃO<sup>3</sup>, Heitor Marques HONÓRIO<sup>4</sup>, Giédre BERRETIN-FELIX<sup>5</sup>

### A frenotomia lingual melhora os sinais/sintomas referidos pelas mães

Sintomas	Grupo controle	Grupo com alteração do frênulo lingual	
	Q Inicial % Sim	Q inicial % Sim	Q Final % Sim
<b>AMAMENTAÇÃO</b>			
O intervalo entre as mamadas é menor do que uma hora?	0	92,85	0
O bebê, entre as mamadas, dorme menos do que duas horas?	0	85,71	0
Quando o bebê está mamando, ele alterna com frequência mamar e dormir?	0	64,28	0
O bebê sempre sente cansaço para mamar (fica ofegante)?	0	100	0
O bebê mama um pouquinho e para bastante para descansar?	0	100	0
O bebê morde o mamilo durante a amamentação?	7,14	50	0
O bebê suga o bico do peito com muita força?	35,71	85,71	0
O bebê apresenta estalos de língua frequentemente durante a amamentação?	14,29	64,28	0
O bebê vai soltando o mamilo durante a amamentação?	0	71,42	0
A senhora sente dor no bico do peito durante a amamentação?	21,43	42,85	0
<b>COORDENÇÃO ENTRE SUCÇÃO/DEGLUTIÇÃO/RESPIRAÇÃO</b>			
O bebê apresenta ruídos frequentemente ao engolir o leite durante a amamentação?	21,43	50	0
O bebê apresenta engasgos frequentemente durante a amamentação?	28,57	57,14	0
O bebê apresenta soluços frequentemente logo após a amamentação?	21,43	50	7,14
O bebê tosse frequentemente durante a amamentação?	0	7,14	0
O bebê regurgita com frequência logo após a amamentação?	21,43	14,28	0

Q Inicial = Questionário Inicial; Q Final = Questionário Final

## Surface Electromyographic Analysis of the Suprahyoid Muscles in Infants Based on Lingual Frenulum Attachment during Breastfeeding.

França ECL<sup>1</sup>, Albuquerque LCA<sup>2</sup>, Martinelli RLC<sup>3</sup>, Gonçalves IMF<sup>4</sup>, Souza CB<sup>5</sup>, Barbosa MA<sup>1</sup>.

### ⊕ Author information

#### Abstract

Muscle electrical activity analysis can aid in the identification of oral motor dysfunctions, such as those resulting from an altered lingual frenulum, which consequently impairs feeding. Here, we aim to analyze the suprahyoid muscle electrical activity of infants via surface electromyography, based on lingual frenulum attachment to the sublingual aspect of the tongue and floor of the mouth during breastfeeding. In the present study, we have studied full-term infants of both genders, aged between 1 and 4 months old. The mean muscle activities were recorded in microvolts and converted into percent values of the reference value. Associations between the root mean square and independent variables were tested by one-way analysis of variance and Student's t-test, with a significance level of 5% and test power of 95%, respectively. We evaluated 235 infants. Lower mean muscle electrical activity was observed with the lingual frenulum attached to apex/lower alveolar ridge, followed by attachment to the middle third/lower alveolar ridge, and between the middle third and apex/lower alveolar ridge. Greater suprahyoid muscle activity was observed with lingual frenulum attachment to the middle third of the tongue/sublingual caruncles, showing a coordination between swallowing, sucking, and breathing. Surface electromyography is effective in diagnosing lingual frenulum alterations, the attachment points of which raises doubt concerning the restriction of tongue mobility. Thus, it is possible to identify oral motor dysfunctions.

Quando o frênulo lingual estava fixado no terço médio da língua e visível a partir das carúnculas sublinguais observou-se **maior atividade elétrica** dos músculos supra-hióideos durante a sucção.

Quando o frênulo lingual estava fixado no ápice da língua e visível a partir da crista alveolar inferior observou-se **menor atividade elétrica** dos músculos durante a sucção.



## **Frenulotomy for breastfeeding infants with ankyloglossia: effect on milk removal and sucking mechanism as imaged by ultrasound.**

Geddes DT<sup>1</sup>, Langton DB, Gollow I, Jacobs LA, Hartmann PE, Simmer K.

### **⊕ Author information**

#### **Abstract**

**OBJECTIVE:** There is evidence that infants with ankyloglossia can experience breastfeeding difficulties including poor attachment to the breast, suboptimal weight gain, and maternal nipple pain, which may lead to early weaning of the infant. No studies have investigated the cause of these breastfeeding difficulties. The objective of this study was to determine the effectiveness of frenulotomy in infants experiencing persistent breastfeeding difficulties despite professional assistance by measuring changes in milk transfer and tongue movement during breastfeeding before and after frenulotomy.

**PATIENTS AND METHODS:** Twenty-four mother-infant dyads (infant age: 33 +/- 28 days) that were experiencing persistent breastfeeding difficulties despite receiving professional advice were recruited. Submental ultrasound scans (Acuson XP10) of the oral cavity were performed both before and >or=7 days after frenulotomy. Milk transfer, pain, and LATCH (latch, audible swallowing, type of nipple, comfort, and hold) scores were recorded before and after frenulotomy. Infant milk intake was measured by using the test-weigh method.

**RESULTS:** For all of the infants, milk intake, milk-transfer rate, LATCH score, and maternal pain scores improved significantly postfrenulotomy. Two groups of infants were identified on ultrasound. One group compressed the tip of the nipple, and the other compressed the base of the nipple with the tongue. These features either resolved or lessened in all except 1 infant after frenulotomy.

**CONCLUSIONS:** Infants with ankyloglossia experiencing persistent breastfeeding difficulties showed less compression of the nipple by the tongue postfrenulotomy, which was associated with improved breastfeeding defined as better attachment, increased milk transfer, and less maternal pain. In the assessment of breastfeeding difficulties, ankyloglossia should be considered as a potential cause.

PMID: 18573859 DOI: [10.1542/peds.2007-2553](https://doi.org/10.1542/peds.2007-2553)

**Após a frenotomia lingual foi observada diminuição da compressão do mamilo, melhora na pega, diminuição da dor e maior transferência de leite.**

## **Evidence of improved milk intake after frenotomy: a case report.**

Garbin CP<sup>1</sup>, Sakalidis VS, Chadwick LM, Whan E, Hartmann PE, Geddes DT.

### **⊕ Author information**

#### **Abstract**

Ankyloglossia (tongue tie) is a well-recognized cause of breastfeeding difficulties and, if untreated, can cause maternal nipple pain and trauma, ineffective feeding, and poor infant weight gain. In some cases, this condition will result in a downregulation of the maternal milk supply. Milk-production measurements (24-hour) for a breastfeeding infant with ankyloglossia revealed the ineffective feeding of the infant (78 mL/24 hours), and a low milk supply (350 mL/24 hours) was diagnosed. Appropriate management increased milk supply (1254 mL/24 hours) but not infant milk intake (190 mL/24 hours). Test weighing convincingly revealed the efficacy of frenotomy, increasing breastfeeding milk transfer from 190 to 810 mL/24 hours. Postfrenotomy, breastfeeding almost completely replaced bottle-feeding of expressed breast milk. This case study confirms that ankyloglossia may reduce maternal milk supply and that frenotomy can improve milk removal by the infant. Milk-production measurements (24-hour) provided the evidence to confirm these findings.

**A frenotomia lingual facilita e aumenta a retirada do leite pelo bebê durante a amamentação.**

## **A double-blind, randomized, controlled trial of tongue-tie division and its immediate effect on breastfeeding.**

Berry J<sup>1</sup>, Griffiths M, Westcott C.

### **⊕ Author information**

#### **Abstract**

**AIM:** This study investigated if a maternally reported, immediate improvement in breastfeeding following division of tongue-tie is due to a placebo effect.

**METHODS:** This randomized controlled trial was conducted at Southampton General Hospital, Southampton, UK, in 2003-2004. Sixty breastfed babies 5-115 days old (mean, 32 days; median, 23 days) were randomized to division (Group A) or non-division (Group B). The mother and a trained observer were blinded and assessed breastfeeding before the intervention. Fifty-seven babies were analyzed because blinding failed in three of the babies in Group A. Following the intervention, the mother's and observer's views were noted, and then those infants allocated to non-division had their tongue-tie divided.

**RESULTS:** Seventy-eight percent (21 of 27) of mothers in Group A reported an immediate improvement in feeding following the intervention, compared with 47% (14 of 30) in Group B (two-tailed  $\chi^2$   $p < 0.02$ ; 95% confidence interval, 6-51%). At 1-day follow-up, 90% (54 of 60) reported improved feeding following division. At 3-month follow-up, 92% (54 of 59) still reported improved feeding, with 51% (30 of 59) continuing to breastfeed.

**CONCLUSIONS:** There is a real, immediate improvement in breastfeeding, detectable by the mother, which is sustained and does not appear to be due to a placebo effect.

PMID: 21999476 DOI: [10.1089/bfm.2011.0030](https://doi.org/10.1089/bfm.2011.0030)

**A frenotomia lingual permite uma recuperação mais rápida dos padrões normais de amamentação.**

## **Efficacy of neonatal release of ankyloglossia: a randomized trial.**

[Buryk M](#)<sup>1</sup>, [Bloom D](#), [Shope T](#).

### **⊕ Author information**

#### **Abstract**

**BACKGROUND:** Ankyloglossia has been associated with a variety of infant-feeding problems. Frenotomy commonly is performed for relief of ankyloglossia, but there has been a lack of convincing data to support this practice.

**OBJECTIVES:** Our primary objective was to determine whether frenotomy for infants with ankyloglossia improved maternal nipple pain and ability to breastfeed. A secondary objective was to determine whether frenotomy improved the length of breastfeeding.

**METHODS:** Over a 12-month period, neonates who had difficulty breastfeeding and significant ankyloglossia were enrolled in this randomized, single-blinded, controlled trial and assigned to either a frenotomy (30 infants) or a sham procedure (28 infants). Breastfeeding was assessed by a preintervention and postintervention nipple-pain scale and the Infant Breastfeeding Assessment Tool. The same tools were used at the 2-week follow-up and regularly scheduled follow-ups over a 1-year period. The infants in the sham group were given a frenotomy before or at the 2-week follow-up if it was desired.

**RESULTS:** Both groups demonstrated statistically significantly decreased pain scores after the intervention. The frenotomy group improved significantly more than the sham group ( $P < .001$ ). Breastfeeding scores significantly improved in the frenotomy group ( $P = .029$ ) without a significant change in the control group. All but 1 parent in the sham group elected to have the procedure performed when their infant reached 2 weeks of age, which prevented additional comparisons between the 2 groups.

**CONCLUSIONS:** We demonstrated immediate improvement in nipple-pain and breastfeeding scores, despite a placebo effect on nipple pain. This should provide convincing evidence for those seeking a frenotomy for infants with significant ankyloglossia.

**TRIAL REGISTRATION:** [ClinicalTrials.gov](#) [NCT00967915](#).

**A frenotomia proporciona uma melhora clara e imediata na dor relatada e na amamentação.**



## **Diagnosis, classification and management of ankyloglossia including its influence on breastfeeding.**

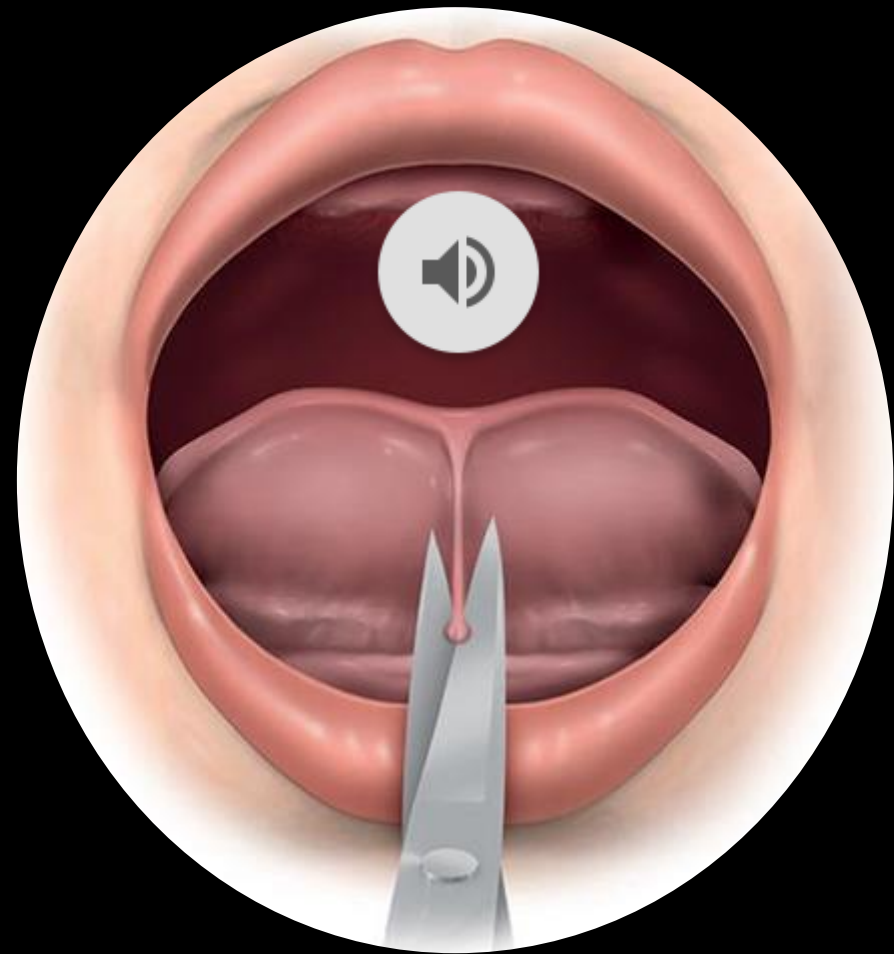
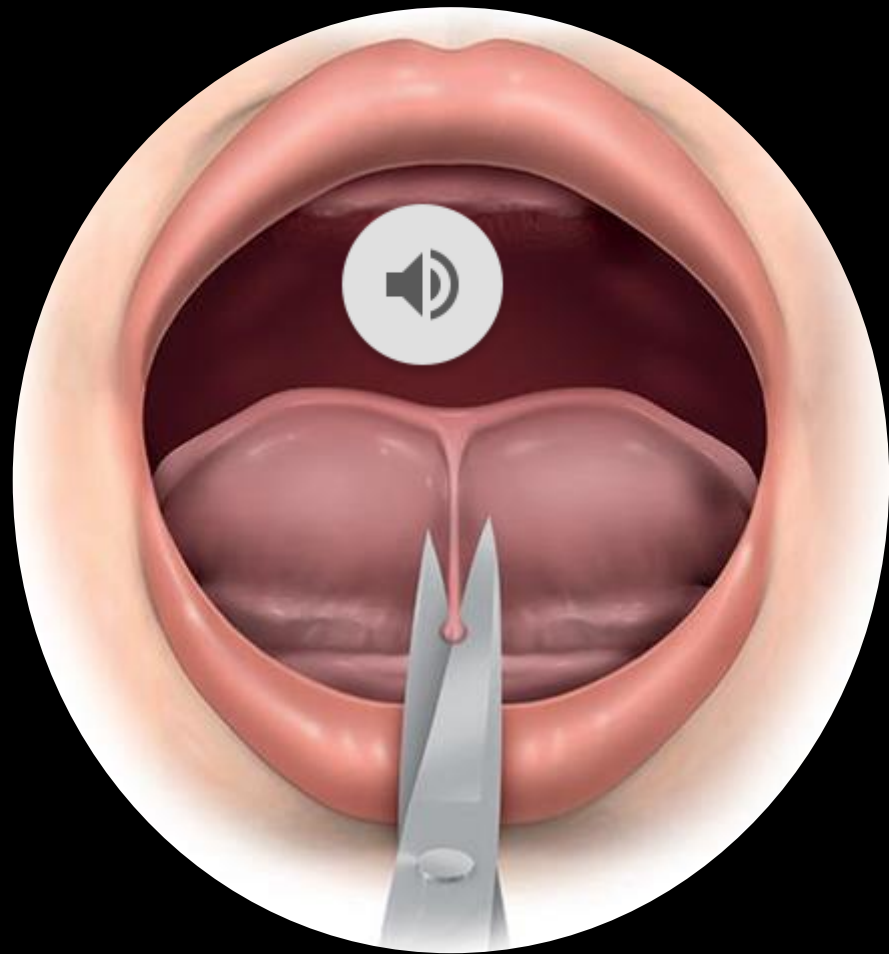
Brzecka D<sup>1</sup>, Garbacz M<sup>1</sup>, Micał M<sup>2</sup>, Zych B<sup>3</sup>, Lewandowski B<sup>4</sup>.

### **⊕ Author information**

#### **Abstract**

Ankyloglossia is defined as a congenital malformation that alters lingual mobility and function. It is listed as one of the possible reasons behind problems with breastfeeding. Due to current WHO recommendations that encourage mothers to breastfeed exclusively up to 6 months of age, quick recognition of any obstacles in the suction mechanism and determining the possible reasons for problems should be a priority. A review of the literature was conducted concerning the diagnosis of ankyloglossia, possible methods of treatment and their efficacy in improving breastfeeding quality. The authors of the research cited claim that any surgical intervention should be performed only in cases of symptomatic ankyloglossia interfering with sucking mechanisms. The most frequent surgical procedure performed in newborns with symptomatic ankyloglossia is frenulotomy. It is a simple procedure with a low risk of complications. The literature gives a great number of studies confirming both the short and long-term efficacy of tongue-tie release in improving breastfeeding quality, with emphasis on decreasing mothers' discomfort, nipple pain and trauma.

**A literatura fornece um grande número de estudos que confirma a eficácia a curto e longo prazo da liberação do frênulo lingual na melhoria da qualidade da amamentação, com ênfase na diminuição do desconforto das mães, dor nos mamilos e trauma.**



# FRENECTOMIA

...é a remoção cirúrgica do frênulo lingual



# FRENECTOMIA



A frenectomia lingual é o procedimento indicado para a maioria dos pacientes com idade superior a 1 ano.



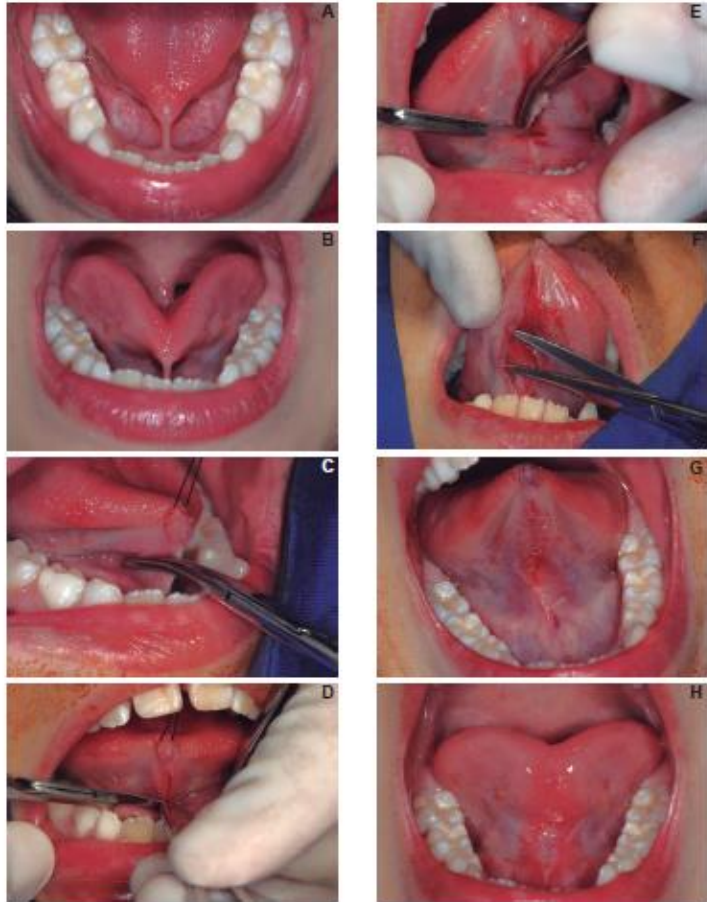
Pode ser realizada com:

- Tesoura
- Bisturi
- Eletrocautério
- Laser



# Surgical techniques for the treatment of ankyloglossia in children: a case series

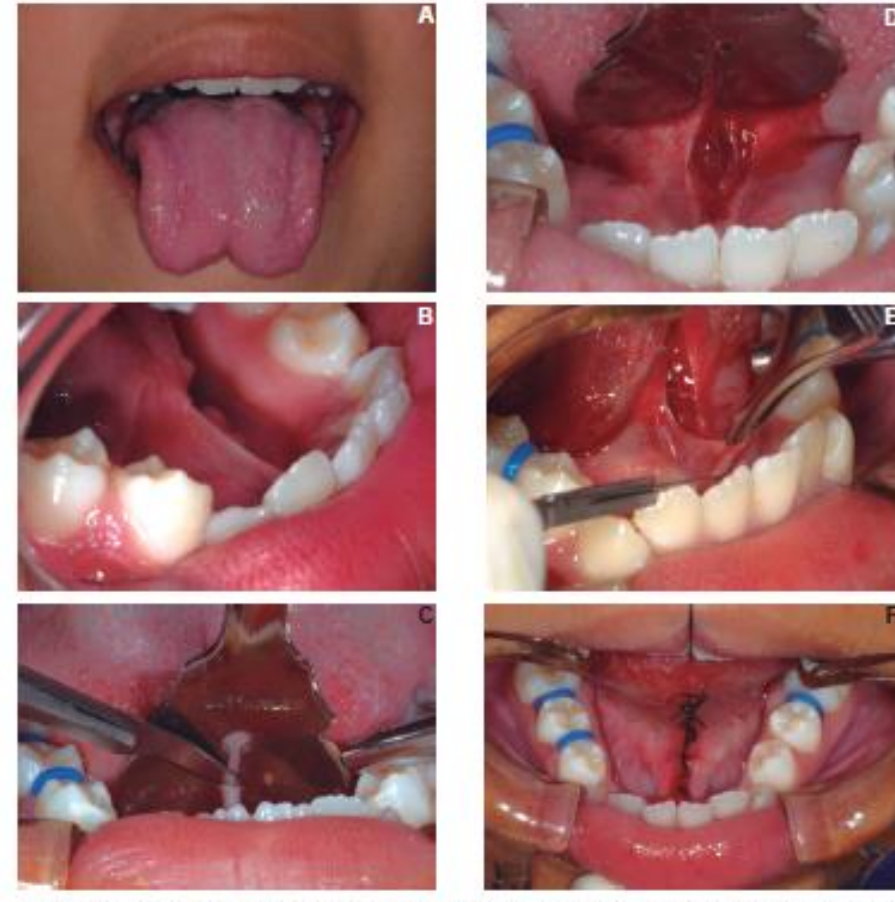
Marina Azevedo JUNQUEIRA, Nayara Nery Oliveira CUNHA, Lidiane Lucas Costa e SILVA, Leandro Borges ARAÚJO, Ana Beatriz Silveira MORETTI, Carlos Eduardo Gomes COUTO FILHO, Vivien Thiemy SAKAI



**Figure 2-** Frenectomy with use of one hemostat. A) Thick and short lingual frenulum with anterior insertion. B) Restricted central tongue tip elevation caused by abnormal attachment of the base of the tongue. C) Frenulum being held with a small curved hemostat with the convex curve facing the ventral surface of the tongue. D) First incision following the curvature of the hemostat, cutting through the upper aspect of the frenulum. E) Second incision at the lower aspect of the frenulum. F) Wound edges being dissected with the tips of blunt-ended scissors. G) Absorbable sutures placed over the wound. H) Clinical aspect of the surgical site on the seventh postoperative day.



**Figure 3-** Frenectomy with use of two hemostats. A) Clinical aspect of the tongue during protrusion. B) Short and tight lingual frenulum. C) Frenulum held with two hemostats, with their tips meeting in the deep aspect near the base of the tongue. D) Excised triangular tissue held with the hemostats. E) Excision of fiber remnants. F) Silk sutures placed over the wound.



**Figure 4-** Frenectomy with use of a grooved director. A) Heart-shaped tongue during protrusion. B) Short lingual frenulum with apical insertion. C) Tongue being raised toward the palate with a grooved director. D) Incision from the tip to the base of the tongue following the grooved director. E) Excision of the remaining frenulum. F) Silk sutures placed over the wound.



# Surgical treatment of ankyloglossia

Aaron R. Baker, MD, Michele M. Carr, DDS, MD, PhD

*From the Department of Surgery, Division of Otolaryngology-Head and Neck Surgery, The Pennsylvania State University—Milton S. Hershey Medical Center, Hershey, Pennsylvania*

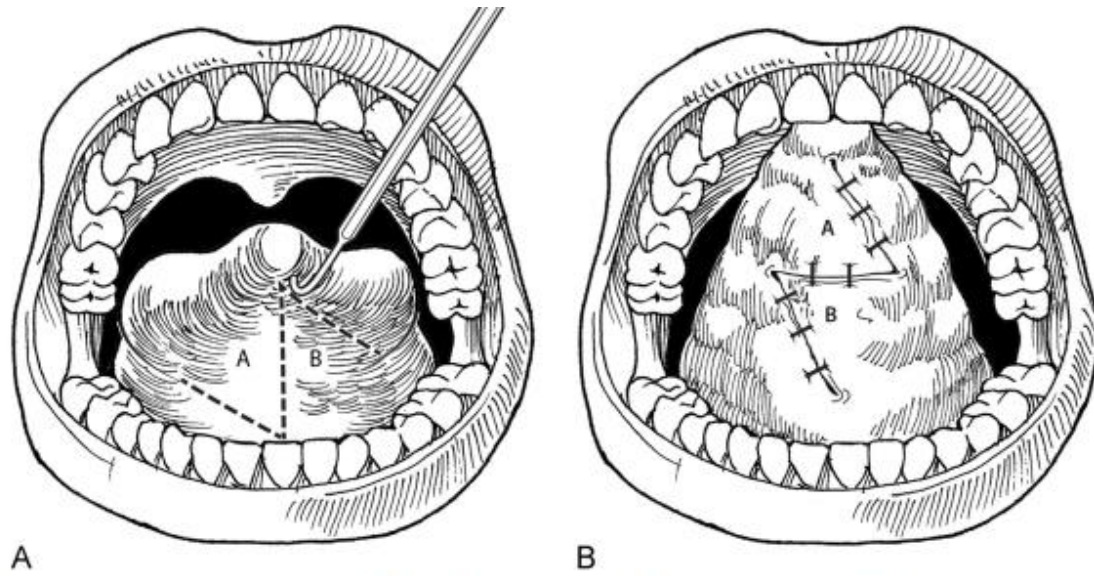


Figure 2 Orientation of flaps in the Z-plasty technique before (A) and after (B) flap rearrangement. (Redrawn from Strader and House.<sup>9</sup>)

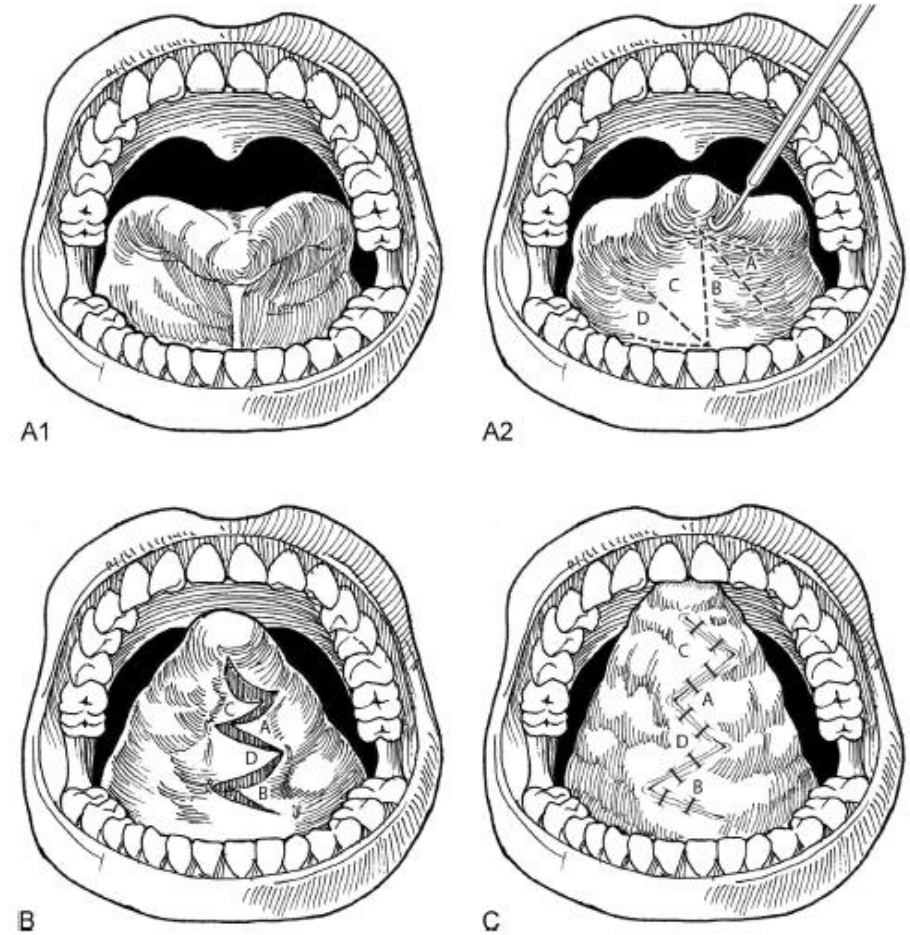


Figure 3 Orientation of flaps in the W-plasty technique. Planning the flaps around the short frenulum (A), flaps raised in their natural orientation (B), and flaps reamanged and inset (C). (Redrawn from Heller et al.<sup>8</sup>)

# Surgical treatment of ankyloglossia in babies—case report

A. R. G. Manfro<sup>1</sup>, R. Manfro<sup>2</sup>,  
M. C. Bortoluzzi<sup>3</sup>

<sup>1</sup>Department of Histology – UNOESC – SC, Brazil; <sup>2</sup>Department of Implantodontic and Maxillofacial Surgery – SOEBRÁS-Passo Fundo – RS and SOEBRÁS – Florianópolis – SC, Brazil; <sup>3</sup>Department of Maxillofacial Surgery – UNOESC – SC, Brazil



*Fig. 1.* Infant's tongue movement is restricted by an abnormal lingual frenulum.



*Fig. 2.* Clinical photograph taken after surgery. Note that proper tissue mobility is achieved immediately after surgery.



# Lingual Frenectomy to Treat Ankyloglossia - A Perio-prosthetic Venture

Divya Bhat<sup>1</sup> and Suchetha A<sup>2</sup>



**Figure 1:** Abnormal lingual frenum



**Figure 2:** Traction sutures at the tip of the tongue



**Figure 3:** Horizontal mattress sutures on the ventral surface of tongue



**Figure 4:** Frenum held with a hemostat



**Figure 5:** Transverse incision of frenum



**Figure 6:** Healing 1 week Post operative



# Frenulotomia lingual em paciente pediátrico: relato de caso

*Lingual frenulotomy in pediatric patient: case report*

*Frenectomía lingual en niño: reporte de caso*

Priscila Oliveira Marques dos **SANTOS**<sup>1</sup>

Helinaldo Corrêa da **CONCEIÇÃO**<sup>1</sup>

Gimol Benchimol de Resende **PRESTES**<sup>2</sup>



**Figura 1:** Características do freio lingual antes da cirurgia.



**Figura 2:** Anestesia tópica na região sublingual.



**Figura 3:** Anestesia infiltrativa sublingual



**Figura 4:** Secção do freio lingual com tesoura de ponta romba.



**Figura 5:** Freio lingual seccionado.



**Figura 6:** Nova inserção do freio lingual após 6 meses da cirurgia.

# Evaluation of Effectiveness of Diode Laser in the Management of Ankyloglossia: A Case Series

*Vikas V. Pakhare<sup>1</sup>, Priyanka G. Jaiswal<sup>2</sup>, Vidya S. Baliga<sup>3</sup>, Pooja P. Suryavanshi<sup>4</sup>, Shilpa B.S<sup>5</sup>*



Figure 1: Preoperative view



Figure 2: Application of diode laser



Figure 3: Postoperative view at 9 month



# Treatment of Ankyloglossia with Carbon Dioxide (CO<sub>2</sub>) Laser in a Pediatric Patient

Nasim Chiniforush<sup>1</sup>, Sara Ghadimi<sup>2</sup>, Nazli Yarahmadi<sup>3</sup>, Abbas Kamali<sup>4</sup>



Figure 1A, B. The front and lateral view of ankyloglossia in pediatric patient



Figure 2A, B. Immediately after procedure



Figure 3. The follow up session after 7 days

# RELIEVING THE TIE: CASE SERIES OF MANAGEMENT OF TONGUE-TIE

Renganath M. J.<sup>1</sup>, Ramakrishnan T.<sup>2</sup>, Manisundar N.<sup>3</sup>, VidyaSekhar<sup>3</sup>, Ebenezer M.<sup>4</sup>, Sivaranjani P.<sup>4</sup>



**Figure 1:** Pre-operative view showing thick band of lingual frenulum.



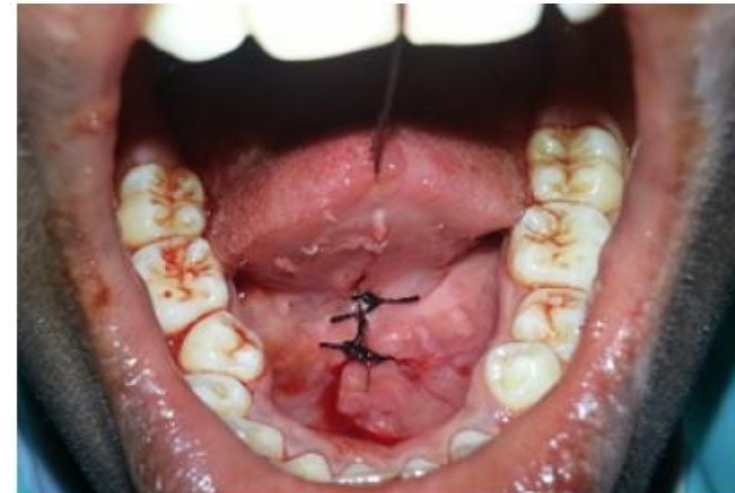
**Figure 2:** Restricted tongue movement pre-operatively.



**Figure 3:** Tip of the tongue sutured for grasping.



**Figure 4:** Simple excision of thick band of muscle fibres using scalpel.



**Figure 5:** Surgical site closure using interrupted sutures.



# Comparison of diode laser-assisted surgery and conventional surgery in the management of hereditary ankyloglossia in siblings: a case report with scientific review

S. Elanchezhiyan • R. Renukadevi • K. Vennila

1

## CONVENTIONAL SURGERY

PRE-OPERATIVE



POST-OPERATIVE



2

## LASER SURGERY

PRE-OPERATIVE



POST OPERATIVE



3

## POST OPERATIVE IMAGE SHOWING HEALING AFTER 1 WEEK

IN CONVENTIONAL SURGERY



IN LASER CASE





Figure 5: Diode laser unit (810 nm)



Figure 6: A fiber-optic wire tip of 200 µm

# Laser: The torch of freedom for ankyloglossia

Barot Varshal J., Vishnoi Shivilal L., Sarath Chandran, Bakutra Gaurav V.



Figure 1: Ankyloglossia, occlusal view



Figure 2: Ankyloglossia, front view

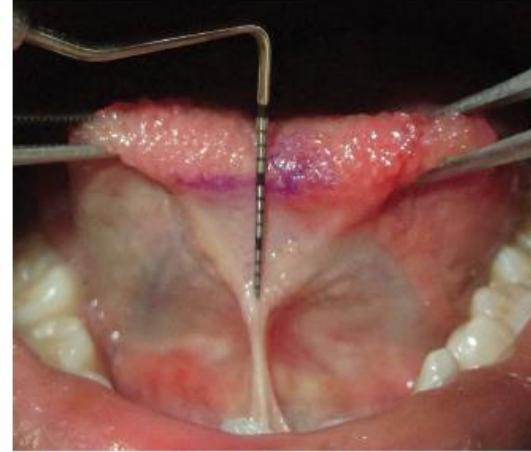


Figure 3: Kotlow's class II, moderate (10 mm) ankyloglossia

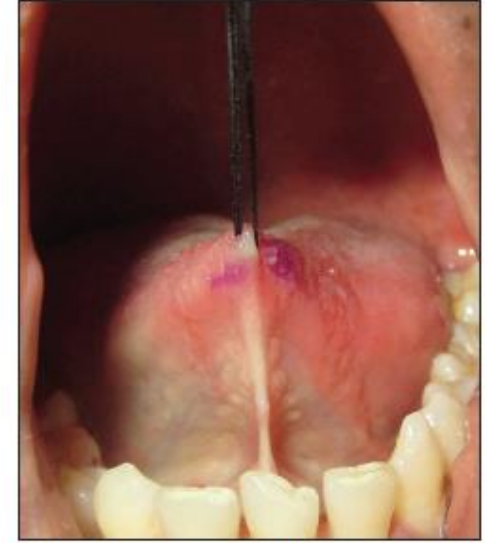


Figure 4: Traction suture at the tip of the tongue



Figure 7: The laser tip initiated by firing; excision of the lingual frenum



Figure 8: Immediately after the laser lingual frenectomy



Figure 9: Post-treatment after 1-week showing "white soft scab" formation

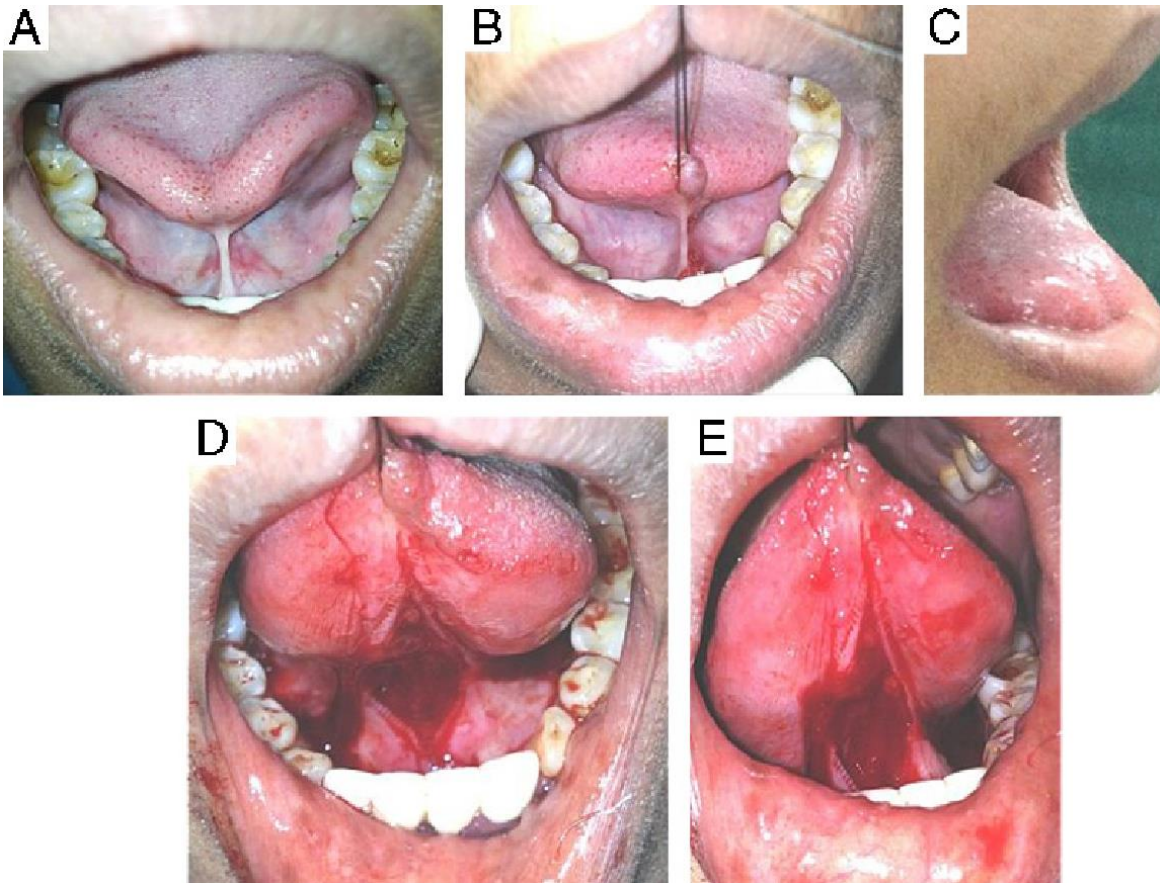


Figure 11: Post-treatment after 6 weeks with complete healing, front view



# Is Use of LASER Really Essential for Release of Tongue-Tie?

*Vikrant Dilip Sane, MDS,\* Sudhir Pawar, MDS,\*  
Sachin Modi, BDS,\* Rashmi Saddiwal, MDS,†  
Mayur Khade, MDS,‡ Hrishikesh Tendulkar, BDS§*

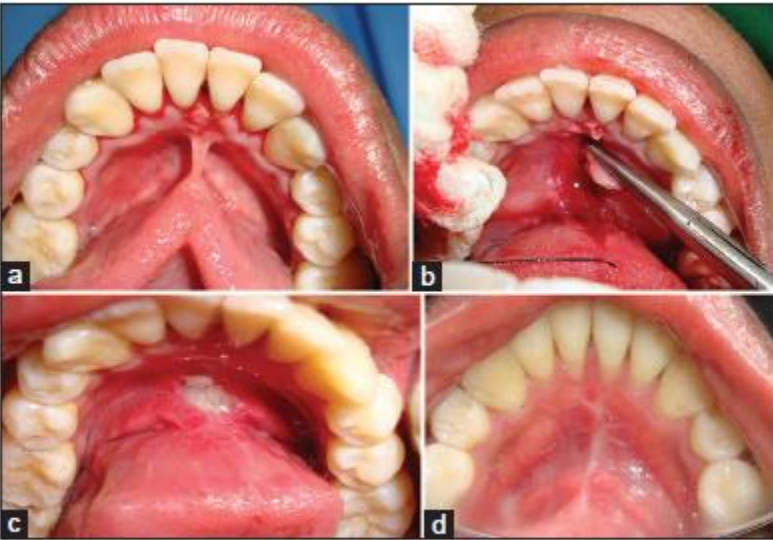


- A frenectomy lingual com o uso de métodos convencionais é um procedimento relativamente simples, seguro e econômico com taxas de complicações muito baixas quando realizado por um profissional de saúde treinado.
- O uso de laser para este procedimento simples significaria tornar as coisas simples, complicadas.



# Clipping the (tongue) tie

Nagate Raghavendra Reddy, Yuvaraja Marudhappan, Renuka Devi, Sumit Narang



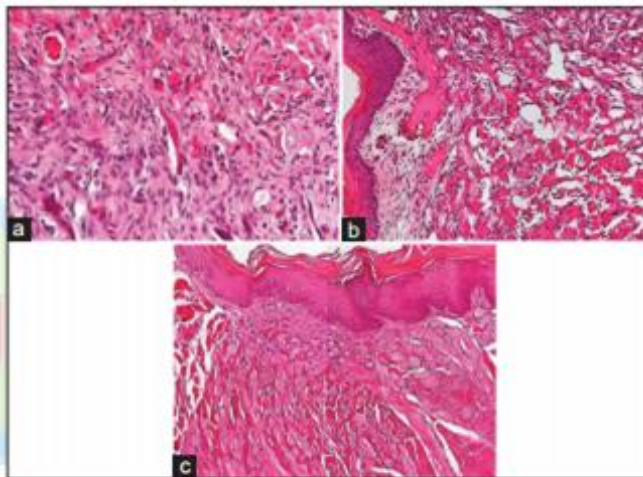
**Figure 1:** Frenectomy with conventional technique (Scalpel and Blade), (a) preoperative view, (b) operative view, (c) 1 week post-operative view, (d) 1 month post-operative view



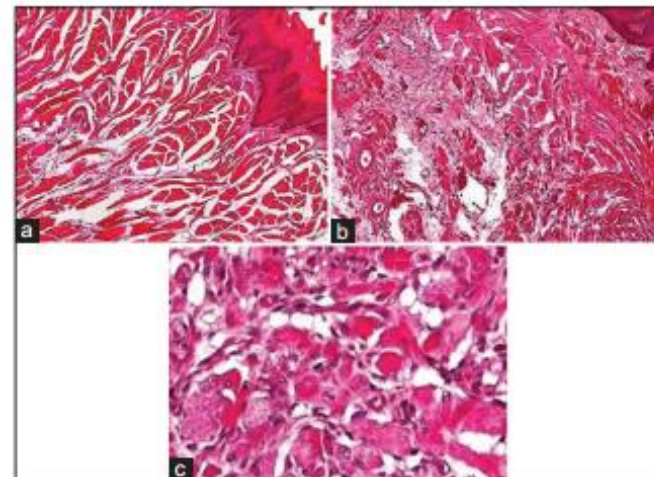
**Figure 2:** Frenectomy with electrocautery, (a) preoperative view, (b) operative view, (c) 1 week post-operative view, (d) 1 month post-operative view



**Figure 3:** Frenectomy with laser, (a) preoperative view, (b) operative view, (c) 1 week post-operative view, (d) 1 month post-operative view



**Figure 4:** Healing after 14 days, (a) with scalpel, (b) with electrocautery, (c) with laser



**Figure 5:** Healing after 28 days, (a) with scalpel, (b) with electrocautery, (c) with laser

**A cicatrização parece melhor, quanto menos manipulação e/ou sutura existirem.**

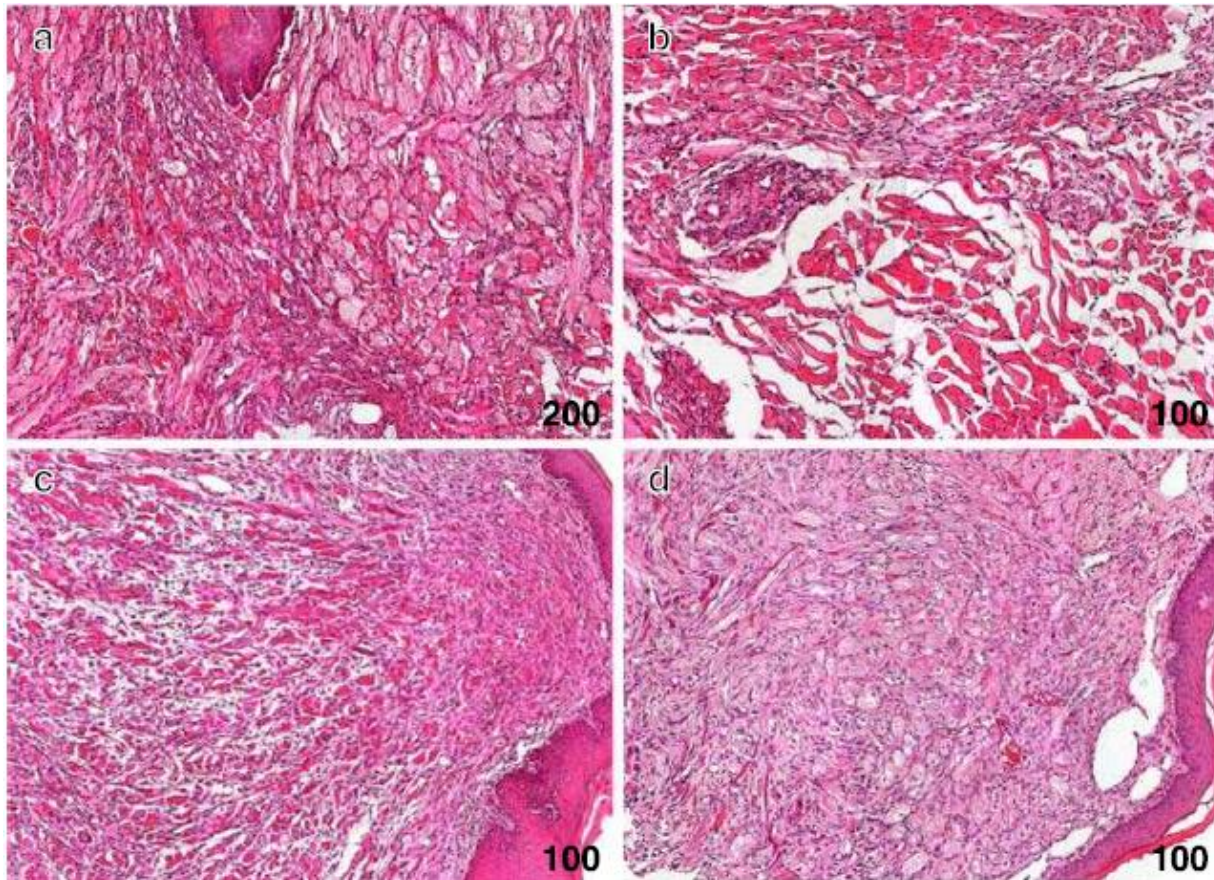


# Healing process after surgical treatment with scalpel, electrocautery and laser radiation: histomorphologic and histomorphometric analysis

Aline Rose Cantarelli Morosolli • Elaine Bauer Veeck •  
Walter Niccoli-Filho • Mônica Fernandes Gomes •  
Maria das Graças V. Goulart

4 técnicas analisadas:

- Bisturi
- Electrocautério
- Laser CO<sub>2</sub>
- Laser Neodimio



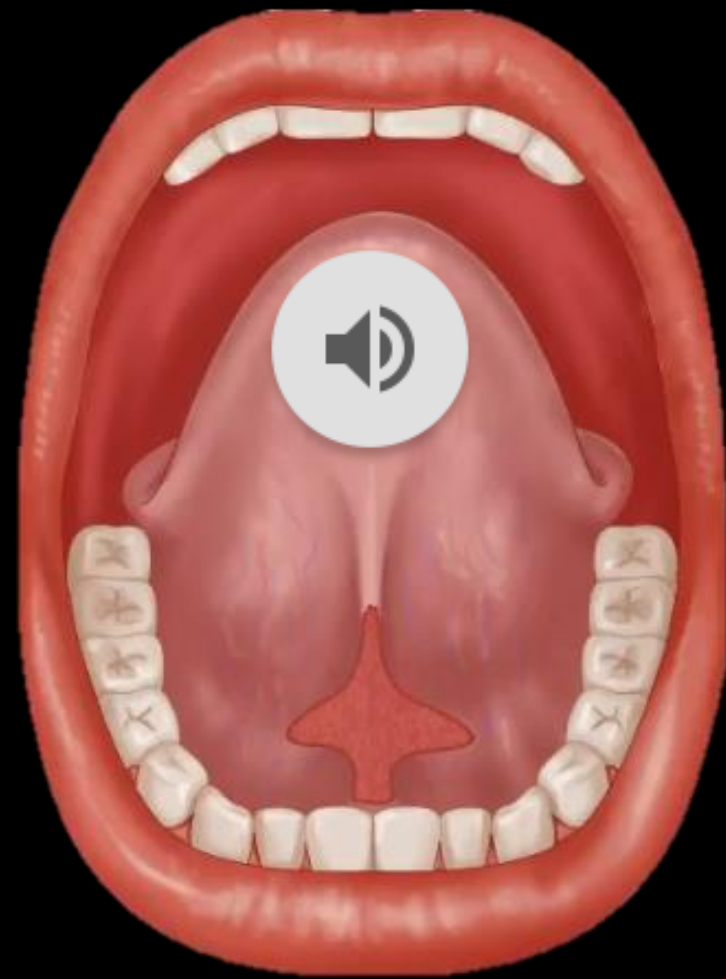
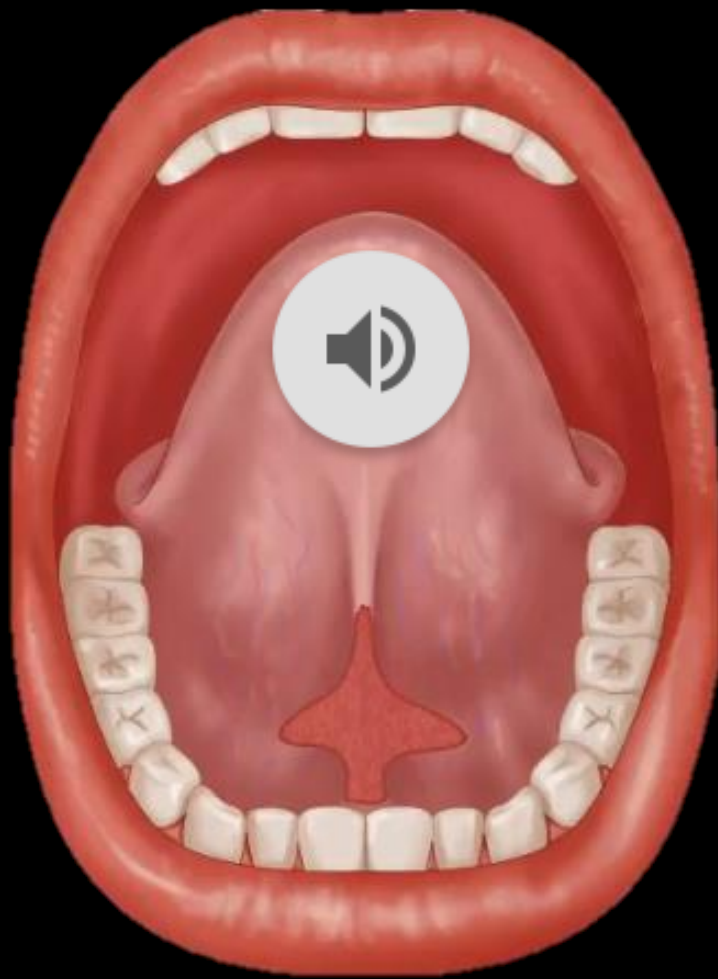
**A cicatrização foi mais rápida e melhor em procedimentos realizados com bisturi**

**Fig. 3** After 21 days. **a** Scalpel group, **b** electrocautery group, **c** CO<sub>2</sub> group, and **d** Nd:YAG group. Hematoxylin–eosin

# FRENOTOMIA/FRENECTOMIA – complicações

- Hemorragia abundante no pós-operatório imediato
- Infecção no leito cirúrgico
- Lesão das carúnculas sublinguais
- Estenose (estreitamento) das carúnculas e posteriormente quadros de sialopatias crônicas
- Sinéquias (aderência de tecido) pós-operatórias

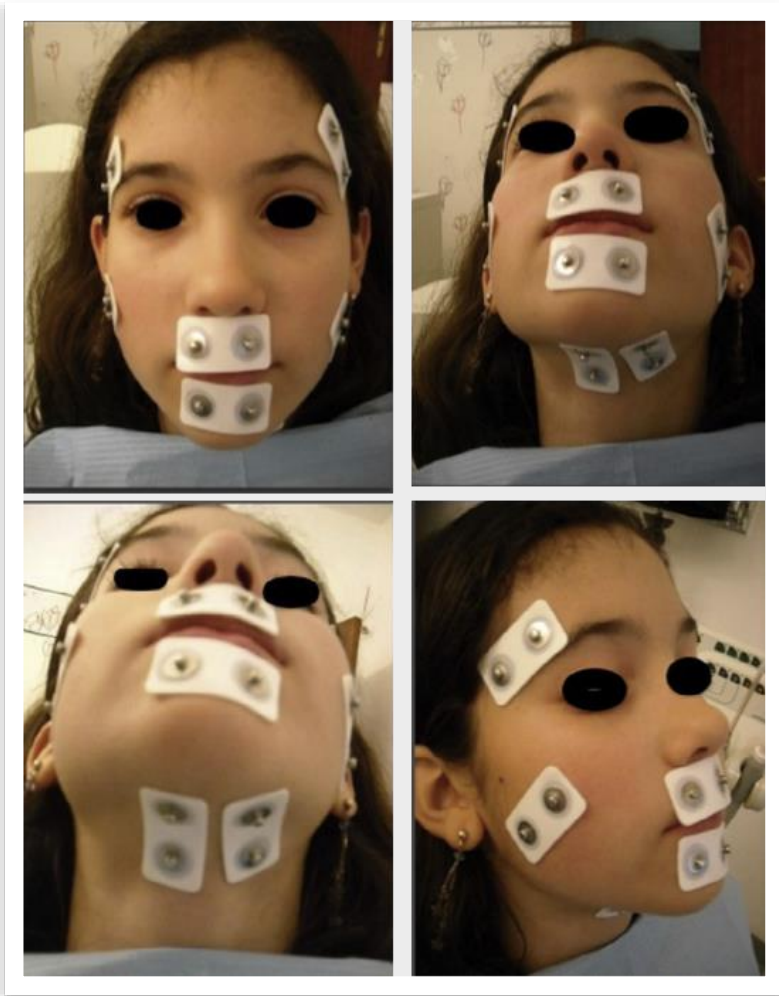
É importante que o profissional esteja treinado para realizar esse procedimento.





## Frenulectomy of the tongue and the influence of rehabilitation exercises on the sEMG activity of masticatory muscles.

Tecco S<sup>1</sup>, Baldini A<sup>2</sup>, Mummolo S<sup>3</sup>, Marchetti E<sup>3</sup>, Giuca MR<sup>4</sup>, Marzo G<sup>3</sup>, Gherlone EF<sup>5</sup>.



A eletromiografia mostrou uma melhora para beijar, engolir e protruir a mandíbula em pacientes com língua presa submetidos à cirurgia.



## Lingual frenulum: changes after frenectomy.

[Article in English, Portuguese]

Marchesan IQ<sup>1</sup>, Martinelli RL, Gusmão RJ.

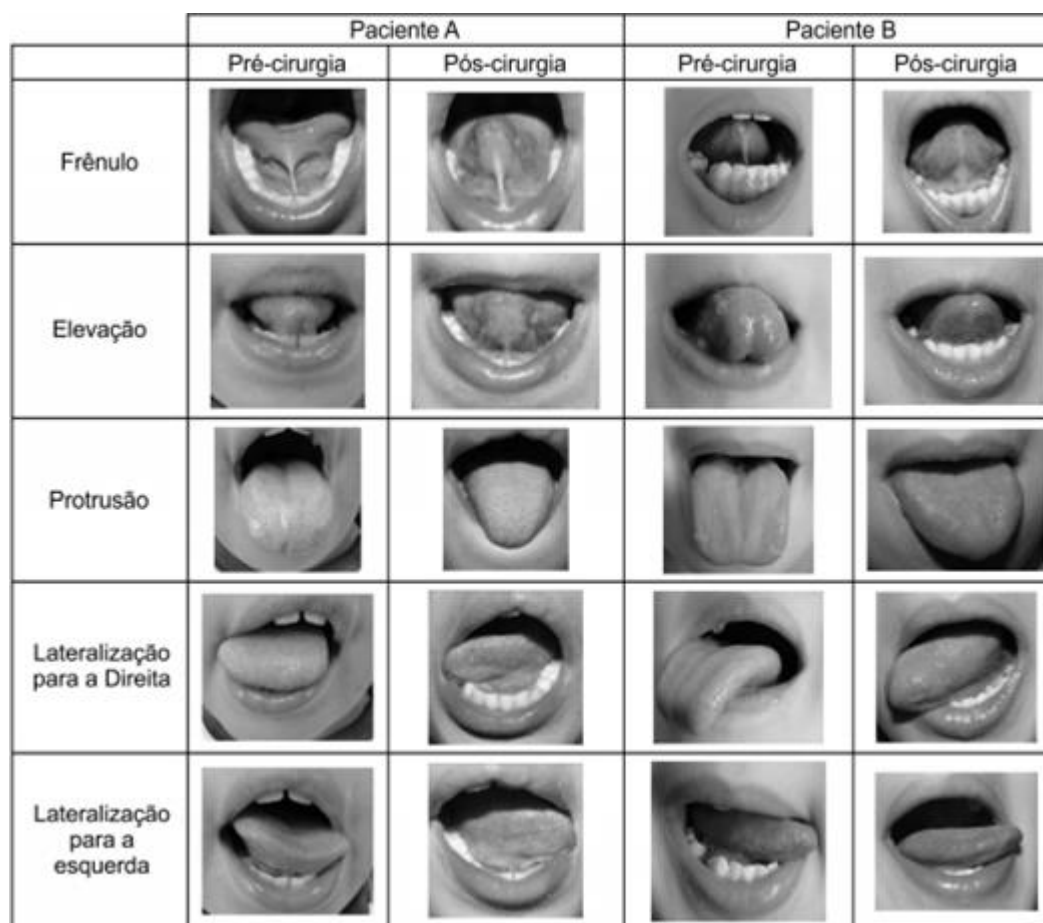


Figura 1. Frênulo lingual e movimentos da língua em dois sujeitos após 30 dias

Tabela 1. Descrição dos dez sujeitos

Sujeitos	Gênero	Idade	Avaliação pré-cirúrgica	30 dias após a cirurgia
1	F	9	Ceceio anterior	Diminuição da interposição anterior de língua na fala e relato de melhora na mobilidade da língua
2	M	6	Distorção do flape alveolar em posição de ataque e em grupo consonantal	Melhora da abertura de boca para falar, mas não na produção dos sons alterados e relato de melhora na mobilidade da língua
3	M	7	Distorção do flape alveolar em posição de ataque, coda e grupo consonantal	Não houve melhora na produção do flape alveolar, mas houve melhora na abertura da boca ao falar, com relato de melhora na mobilidade da língua
4	M	6	Omissão do flape alveolar na posição de ataque, coda e grupo consonantal, assim como do [l] ao compor grupo consonantal	Aquisição assistemática do flape alveolar em posição de coda e relato de melhora na mobilidade da língua
5	M	5	Postura de lábios entreabertos, com diastema entre os incisivos centrais inferiores; omissão dos plosivos velares (surdo e sonoro) [k] e [g]; simplificação dos grupos consonantais com o flape alveolar; substituição do flape alveolar em posição de coda pela semivogal [y]; distorção do flape alveolar em posição de ataque	Vedamento labial em repouso, melhora na abertura de boca e relato de melhora na mobilidade da língua
6	M	2	Baba e lábios entreabertos	Vedamento labial em repouso e sensível diminuição da baba
7	M	6	Substituição do fricativo alveolar surdo e do fricativo pós-alveolar surdo pelo fricativo labiodental surdo; substituição do fricativo alveolar sonoro e do fricativo pós-alveolar sonoro pelo fricativo labiodental sonoro; omissão do flape alveolar em posição de ataque e de coda; simplificação dos grupos consonantais	Melhora da abertura de boca para falar, mas não da produção dos sons e relato de melhora da mobilidade da língua
8	M	15	Distorção do flape alveolar em todas as suas posições	Melhora da abertura de boca para falar, tentativa espontânea de adequação do flape alveolar e relato de melhora da mobilidade da língua
9	M	33	Dificuldade de produzir o flape alveolar em posição de ataque e de coda e em grupos com [p] e [b].	Melhora da abertura de boca para falar e relato de melhora da mobilidade da língua, com maior facilidade para produzir os sons alterados
10	F	33	Dificuldade para fazer a limpeza do vestibulo oral com a língua durante a alimentação	Conseguiu realizar a limpeza do vestibulo oral e relato de melhora da mobilidade da língua

Legenda: F = feminino; M = masculino

# ASSIM...



- A língua necessita estar livre para realizar seus movimentos e suas funções!
- Sempre que o frênulo lingual estiver limitando os movimentos da língua, a cirurgia deve ser indicada o mais cedo possível.
- É importante que o profissional esteja treinado para realizar esse procedimento.

# FINALIZANDO...

Para diminuir as controvérsias....

Utilizar os protocolos já publicados

Aumentar o número de pesquisas baseadas em evidências

Maior divulgação do conhecimento adquirido

Treinar profissionais para as avaliações propostas e já publicadas





*Roberta Martinelli*

robertalcm@gmail.com

