

# Freins divers à l'allaitement. La langue,... et autres?

## Que dit la littérature?

Marc-Alain Panchard  
Pédiatre, Néonatalogue

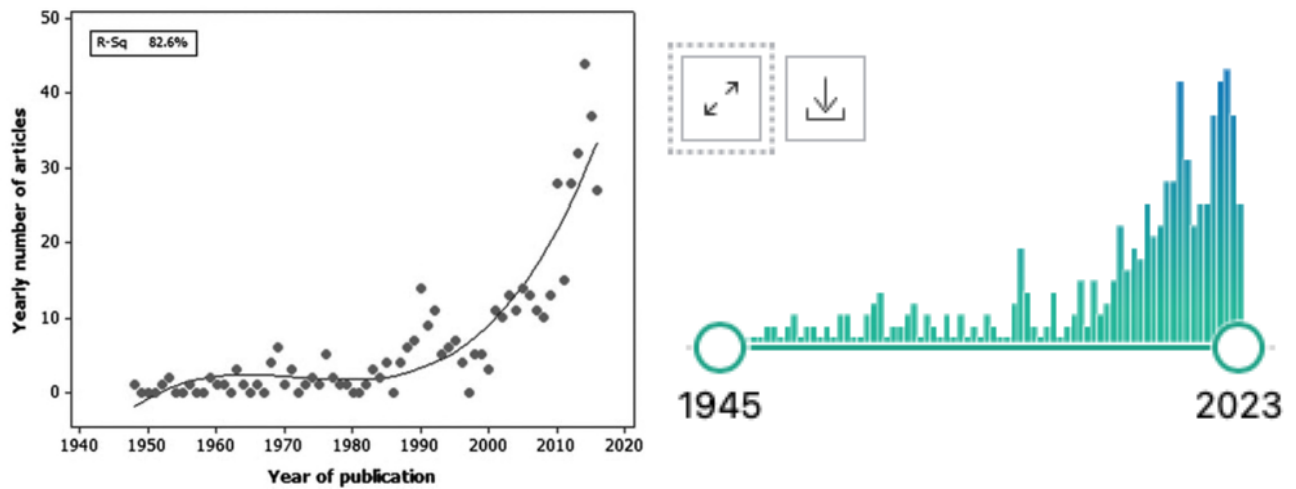
Symposium « Rendre l'allaitement possible »  
Lausanne, 19 septembre 2023



Si j'aurais su,...



## Evolution des publications



**FIG. 1.** Yearly number of tongue tie-related articles (Y-axis) versus year of publication (X-axis).

## Plus de voix?



Symphonie?

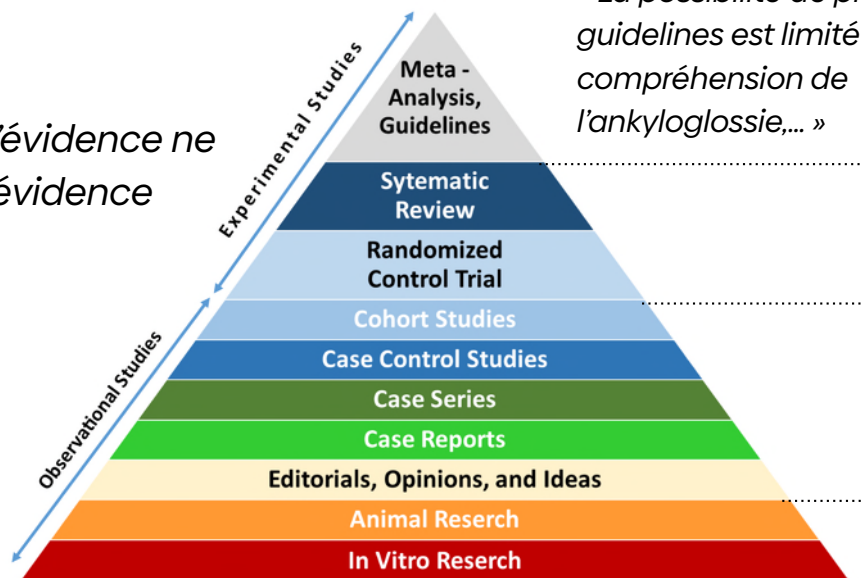


Cacophonie?

# Qualité des évidences en médecine

## Mais

« Absence d'évidence ne signifie pas évidence d'absence. »



« La possibilité de produire des guidelines est limité par notre compréhension de l'ankyloglossie,... »

# Journal scientifique ou Marie-Claire?



## Etude

- pas de groupe contrôle
- pas d'aveugle
- pas de sham
- nombreuses affirmations non sourcées sur
  - douleur au mamelon
  - couleur du mamelon
  - modifications du mamelon

## **BREASTFEEDING SYMPTOMS WITH TONGUE- AND LIP-TIE**

Rebecca R. Hill, PhD, DNP, FNP-C, Melissa A. Richard, MSN, RN, AGPCNP-BC, and Britt F. Pados, PhD, RN, NNP-BC

# Controverses!!!

## Posterior tongue tie and lip tie: a lucrative private industry where the evidence is uncertain

Private practitioners are offering "posterior tongue tie" or "lip tie" division to newborns with feeding difficulties, despite a paucity of evidence in this area.

Lyndsay Fraser,<sup>1</sup> Stuart Benzie,<sup>1</sup> Jenny Montgomery<sup>2</sup>  
 BMJ 2020:371

## Division of tongue tie: an assault on a baby

Nigel S G Mercer *cleft surgeon*

BMJ 2020:372

Bonjour à tous,

Le fait qu'une sage-femme ose faire la pression sur la mère intrigue, puisque l'indication à faire un gest devrait être la responsabilité des médecins.

Il me semble que les sages-femmes n'aiment pas les petites peaux « qui servent à rien ».

Avant c'étaient les prépuces collés et maintenant c'est les frenulums de la langue.

Un protocole qui met les choses au clair et empêche ces demandes non fondées, protégerait les bébés des douleurs inutiles et des procédures potentiellement risquantes.

Un protocole de plus, mais voilà, c'est ce qu'il se passe quand il n'y a plus de bon sens.....

Amicalement



# The value of frenotomy for ankyloglossia from a parental perspective

Sam Illing, Martin Minnee, Jackie Wheeler, Lydia Illing

### ABSTRACT

**AIMS:** We sought the parental experience of the effects of frenotomy in the presence of ankyloglossia by exploring the reasons for seeking frenotomy, impressions of its value and its impact on breastfeeding.

**METHOD:** A prospective survey of infants receiving frenotomy in a general practice in Palmerston North was undertaken. Infants aged under six months with confirmed ankyloglossia via a GP and lactation consultant were included. One hundred and seventy-six children met the study criteria. Parents completed a pre-procedure questionnaire and received a follow-up phone call.

**RESULTS:** Results demonstrated that 97% of parents would seek out frenotomy again in similar circumstances. Initially, 93 mother-infant pairs (53%) were not fully breastfeeding; post frenotomy, 33 of these pairs were able to start fully breastfeeding. One hundred and thirty-two pairs showed no change in feeding method. Nine pairs deteriorated from partial breastfeeding to artificial feeding, and two pairs deteriorated from fully breastfeeding to artificial feeding. Both feeding time and nipple pain improved post-frenotomy. Eighty percent of parents reported a moderate or significant improvement in their presenting issue, and 77% reported moderate to significant improvement in feeding quality. There were no major complications.

**CONCLUSION:** Frenotomy was reported to be beneficial, with a high level of parental satisfaction and improvement in rates of full breastfeeding and feeding duration, as well as a reduction in nipple pain. Parents were willing to go to significant lengths to access the procedure.

NZMJ 2019;132(1500):70-81

## Re: 'The value of frenotomy for ankyloglossia from a parental perspective'

Graham J Sharpe

This was not a medical or scientific study. It was a consumer satisfaction survey, with the same credibility one might give to a survey of satisfaction with a washing machine or a restaurant.

Of note there is no control group. Further, in a radio interview one of the authors denied the need for a control group, thus bringing the credibility of the paper further into doubt.

NZMJ 2019;132(1502):92-93



# Qualité de l'évidence

## Niveau d'évidence peu élevé: RCT est l'exception

**Table 1:** Characterization of the studies of association between lingual frenulum alteration and breastfeeding in terms of type, number of participants, age of infants at the beginning of the study, and follow-up time

Authors	Type of study	Number of participants	Infant age at the beginning of the research	Follow-up time
Riskin et al. <sup>43</sup>	Unicentric observational	183 mothers of babies with ankyloglossia 314 mothers of babies without ankyloglossia (control)	1-6 years	No follow-up
Haham et al. <sup>7</sup> Pransky et al. <sup>4</sup>	Prospective series cohort Retrospective review of patient data	200 infants 618	0-3 days Retrospective review of patient data. Information not provided	14 days Retrospective review of patient data. Information not provided
Marcione et al. <sup>5</sup>	Cross-sectional, observational, analytical, with a quantitative approach.	165 infants	1-4 months	No follow-up
Fujinaga et al. <sup>23</sup>	Cross-sectional exploratory description	139 dyads	Newborns with more than 15 hours of life	No follow-up
Campanha et al. <sup>13</sup>	Cross-sectional study	130 dyads	1-5 days	No follow-up
Walker et al. <sup>48</sup>	Prospective cohort	100 dyads	2 days	14 days

**Table 3:** Characterization of the studies of association between frenotomy and breastfeeding in terms of type, number of participants, age of infants at the beginning of the study, and follow-up time

Authors	Type of study	Number of participants	Infant age at the beginning of the research	Follow-up time
Emond et al. <sup>44</sup>	Randomized controlled trial	• 55 infants (intervention group) • 52 infants (control group)	Newborns with less than 2 weeks of life	8 weeks
Dollberg et al. <sup>11</sup>	Prospective follow-up	264 dyads with infants undergoing lingual frenotomy due to difficulties in breastfeeding	Median of 14 days of life (1-135)	6 months
Martinelli et al. <sup>45</sup>	Prospective longitudinal	109 infants	30 days	35 days
Benoiton et al. <sup>46</sup>	Prospective audit	43 patients	Median of 6.6 weeks (2-20)	2 weeks
Ghaheeri et al. <sup>12</sup>	Cohort prospective	237 dyads	0-12 weeks	1 month
Billington et al. <sup>19</sup>	Prospective	100 infants	Median of 17 days (2-88)	3 months
Wakhamrittee et al. <sup>47</sup>	Prospective cross-sectional study	328 dyads	No information	3 months
Muldoon et al. <sup>18</sup>	Prospective before and after the cohort study	89 mothers	No information	1 month
Ghaheeri et al. <sup>48</sup>	Prospective cohort	54 dyads	0-9 months	1 month



Colombari et al. Relationship between breastfeeding difficulties, ankyloglossia, and frenotomy: literature review. J Contemp Dental Pract. 2021;22(4):452-461



# Définition: Delphi

**Table II.** Level of certainty that this item should be evaluated in defining tongue-tie\*

Diagnostic items	Highest +(essential)	Second Highest (likely needed)	= Total %	Round 'in' on
<b>Anatomy:</b>				
1. "Speed bump" or tight tissue under tongue	54%	31%	= 84%	Round 2
2. Tip of tongue is attached directly to lower gum	77%	0%	= 77%	Round 1
3. Bifid appearance of tongue tip	62%	15%	= 77%	Round 1
4. Distance from tongue tip to frenum is < 1 cm	38%	38%	= 77%	Round 1
<b>Tongue Function:</b>				
5. Inability to elevate tongue	77%	15%	= 92%	Round 2
6. Downward protrusion of tongue cannot reach beyond lower lip	54%	23%	= 77%	Round 1
7. Upward protrusion of tongue cannot reach beyond upper lip	38%	39%	= 77%	Round 1
8. Lateral protrusion of tongue cannot reach corner of mouth	23%	54%	= 77%	Round 1
9. Floor of mouth tenting with tongue elevation	31%	39%	= 70%	Round 2
<b>Baby Nursing Issue:</b>				
10. Latch attachment difficulty during breastfeeding	62%	31%	= 93%	Round 1
11. Gumming or chewing the nipple	62%	23%	= 85%	Round 2
12. Clicking sound while nursing	39%	39%	= 78%	Round 2
13. Noisy breather, starts & stops, and pulls off nipple when nursing	39%	39%	= 78%	Round 2
<b>Mother Issue:</b>				
14. Nipple trauma	54%	31%	= 85%	Round 2
15. Breastfeeding pain to mother	54%	23%	= 77%	Round 1
16. Inadequate supply leading to baby weight concern	46%	31%	= 77%	Round 2

\*The 16 diagnostic items chosen by the expert panelists on Rounds 1 and 2 which had a consensus agreement > 70% that each diagnostic item had either the highest or second highest "level of certainty", as required for a diagnostic item to be included in a consensus definition of tongue-tie in newborns.

**Table III.** The Consensus Tongue-Tie Case Definition for newborns (birth→6 months) for use in research\*

**CRITERIA SET #1:**

Tip of tongue is attached directly to lower gum

OR in the absence of presenting with Criteria Set #1:

**CRITERIA SET #2:**

Inability to elevate tongue AND. . .

At least two (2) diagnostic items selected from the following:

1. Latch attachment difficulty during breast- or bottle-feeding (either as self-reported by mother, or professionally diagnosed).
2. "Speed bump" or tight tissue under tongue
3. Floor of mouth tenting with tongue elevation
4. Bifid appearance of tongue tip
5. Distance from tongue tip to frenum is < 1 cm
6. Downward protrusion of tongue cannot reach beyond lower lip
7. Upward protrusion of tongue cannot reach beyond upper lip
8. Lateral protrusion of tongue cannot reach corner of mouth
9. Gumming or chewing the nipple
10. Breastfeeding pain to mother
11. Nipple trauma
12. Noisy breather, starts & stops, pulls off nipple

\*The final NYU-TTCD for newborns consensus definition as developed by the expert panel in this Delphi Survey as proposed for use in research.

## Définition

### Frein antérieur

- ▶ Pas de définition standard
- ▶ Ankyloglossie antérieure (ou anomalie du frein de langue antérieur): attachement du frein à la pointe de la langue ou près de la pointe, limitant les mouvements et la protrusion

### Frein postérieur

- ▶ Controversé
- ▶ Frein sous-muqueux derrière base du frein « visible »
- ▶ Caractérisation difficile
- ▶ Palpation nécessaire, mauvaise concordance inter-observateurs

# Anatomie

- N'est pas une structure isolée
- Terme de « frein postérieur » est anatomiquement faux et devrait être abandonné
- Pas de lien anatomique clair frein / fonction
- Les systèmes de grading anatomiques ne sont que descriptifs et pas fonctionnels
- Le nerf lingual est tout proche,...

# Gradation anatomique

Table 1. Common Grading Systems for Ankyloglossia

Grading System (Source)	Anatomical Classification Criteria	Posterior Ankyloglossia Classification
Coryllos system (American Academy of Pediatrics Section on Breastfeeding, <sup>26</sup> 2004)	Type 1: Attachment of frenulum to the tongue tip, usually in front of the alveolar ridge Type 2: 2-4 mm behind the tongue tip and on or just behind the alveolar ridge Type 3: Attachment to the midtongue and middle of the floor of mouth Type 4: Against the base of the tongue	Consists of types 3 and 4 with functional impairment
Kotlow system (Kotlow, <sup>27</sup> 1999)	Normal: >16-mm free tongue length Class I (mild): 12 to 16-mm free tongue length Class II (moderate): 8 to 11-mm free tongue length Class III (severe): 3 to 7-mm free tongue length Class IV (complete): <3-mm free tongue length	Consists of normal and class I with functional impairment
Kotlow system revised (Kotlow, <sup>28</sup> 2011)	Class I: 0 to 3-mm attachment from the tongue tip Class II: 4 to 6-mm attachment from the tongue tip Class III: 7 to 9-mm attachment from the tongue tip Class IV: 10 to 12-mm or submucosal attachment from the tongue tip	Consists of classes III and IV with functional impairment
Tongue elevation (Lalakea and Messner, <sup>24</sup> 2003; Williams and Waldron, <sup>29</sup> 1985; Notestine, <sup>30</sup> 1990; and Ruffoli et al., <sup>31</sup> 2005)	Normal: >23 mm Mild: 17-22 mm Moderate: 4-16 mm Severe: ≤3 mm	NA
Tongue protrusion (Lalakea and Messner, <sup>24</sup> 2003; Messner and Lalakea, <sup>25</sup> 2002)	Normal: 20-25 mm Ankyloglossia: <15 mm	NA

Abbreviation: NA, not applicable.

## Gradation fonctionnelle

- HATLFF (Hazelbaker Assessment Tool for Lingual Frenulum Fonction)
- BTAT (Bristol Tongue Assessment Tool)
- BBAT (Bristol Breastfeeding Assessment Tool)
- TABBY (Tongue-tie And Breastfed BabY)
- BSES (Breastfeeding Self-Efficacy Scale)
- BSES-SF (Breastfeeding Self-Efficacy Scale Short Form)
- IBFAT (Infant Breastfeeding Assesement Tool)
- LATCH (Latch, Audible swallowing, Type of nipple, Comfort, Hold)
- LFPI (Lingual Frenulum Protocol for Infants)

## Que dit la littérature?

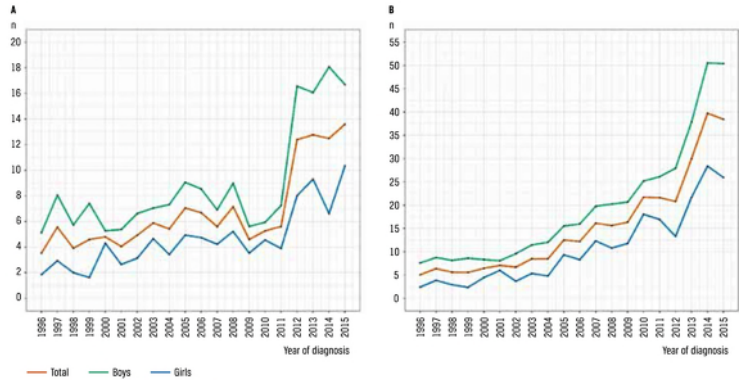
- Le frein de langue n'est pas une structure isolée
- Terme de « frein postérieur » est anatomiquement faux et devrait être abandonné
- Pas de lien anatomique entre frein anatomique et fonction
- Les systèmes de grading anatomiques ne sont que descriptifs et pas fonctionnels

# Epidémiologie

## Incidence

- Très variable: 0.02 % à 12 %
  - Selon centres (HATLFF: 4.2 % à 12.8%)
  - Selon gradation fonctionnelle (BTAT: 4.8% et LFPI: 17%) ou clinique (Coryllos 1-4 chez 199/200 NNés (!) mais 50-75% asymptomatiques)
- Lié à absence de consensus sur définition

FIGURE 1 / Incidence per 100,000 of ankyloglossia (A) and frequency per 100,000 of frenotomy (B) among children aged 0-17 years in Denmark in the 1996-2015 period.



## Clinique

- Asymptomatique (75%)
- Découverte lors d'investigations de difficultés alimentaires. Causalité?
- Découverte lors d'investigations pour problèmes de langage. Causalité?
- Allaitement difficile (douleurs)?
- SAOS?
- Hygiène orale problématique?
- Problèmes sociaux (sucrer glace, tirer la langue, baiser)?
- Difficultés à jouer de certains instruments à vent?



# Allaitement

## Peu d'associations significative

**Table 2.** Comparison between the data of the Neonatal Tongue Screening Test from the LFPI and the Breastfeeding Observation Aid<sup>(28)</sup> using the chi-square and Fisher's exact tests

Breastfeeding Observation Aid		Without ankyloglossia		With ankyloglossia		Value-p	O.R.	C.I.-95%
Mother (General)	No signals of difficulties	91	82%	20	18%	0.396	1	-
	Signals of possible difficulties	14	74%	5	26%	1.63		(0.53; 5.03)
Baby (General)	No signals of difficulties	85	80%	21	20%	1.000	1	-
	Signals of possible difficulties	20	83%	4	17%	0.74		(0.28; 2.69)
Breast	No signals of difficulties	43	77%	13	23%	0.316	1	-
	Signals of possible difficulties	62	84%	12	16%	0.64		(0.27; 1.54)
Baby's Position	No signals of difficulties	69	81%	16	19%	0.871	1	-
	Signals of possible difficulties	36	80%	9	20%	1.08		(0.43; 2.68)
Baby's Attachment	No signals of difficulties	36	82%	8	18%	0.828	1	-
	Signals of possible difficulties	69	80%	17	20%	1.11		(0.44; 2.82)
Suckling	No signals of difficulties	44	100%	0	0%	<0.001	1	-
	Signals of possible difficulties	61	71%	25	29%	36.06		(2.19; 622.4)

**Caption:** O.R. = Odds Ratio; C. I. = Confidence interval

# Allaitement

Il semble relativement clair que

- Difficulté ± liées avec système gradation (NTST/ATLFF, mais pas BTAT)
- Une ankyloglossie contribue aux difficultés d'allaitement
- N'affecte pas l'allaitement maternel exclusif

## Que dit la littérature?

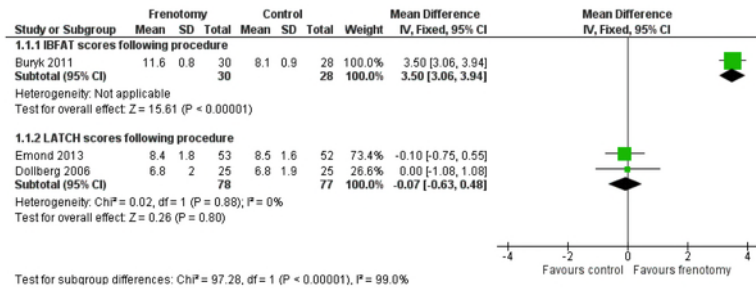
- La majorité des nouveau-nés avec un frein de langue n'ont pas de problème
- Le frein de langue est associé avec les problèmes d'allaitement
- Les gradations anatomiques n'ont pas de relation avec les difficultés alimentaires des nouveau-nés
- Certaines gradations fonctionnelles ont une relation avec les difficultés alimentaires des nouveau-nés

## Traitements

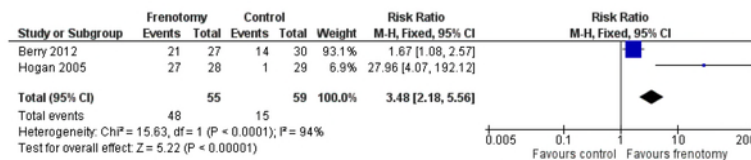
- Dépend de l'indication, de la sévérité et de l'âge
- Non chirurgicaux
  - Consultation de lactation
  - Téterelle
  - Positionnement
  - Stretching de la langue
  - Autres (physiothérapie, logopédie, ostéopathie, naturopathie,...?)
- Chirurgicaux
  - Frénotomie / Frénulotomie
  - Frénulectomie ± myotomie ± plastie en Z
  - Ciseaux, scalpel, laser

# Utilité de la frénotomie

**Figure 4. Forest plot of comparison: I Frenotomy versus no frenotomy or sham procedure, outcome: I.1 Infant breastfeeding assessed by a validated scale.**



**Figure 5. Forest plot of comparison: I Frenotomy versus no frenotomy or sham procedure, outcome: I.6 Qualitative assessment of infant feeding by parental survey performed within 48 hours of the procedure.**



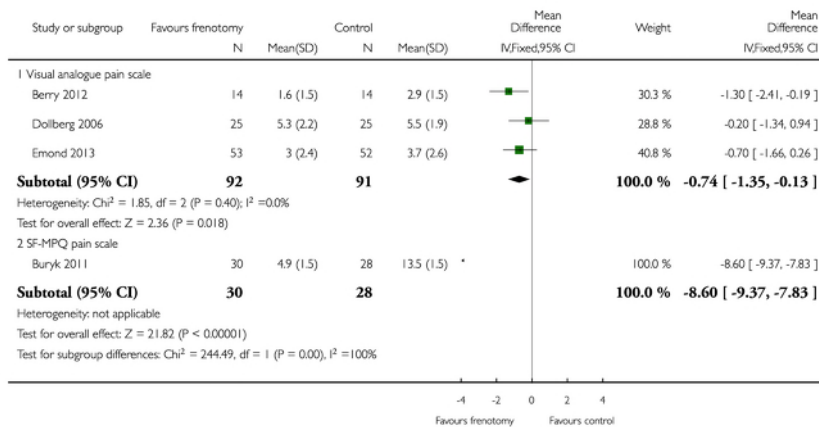
# Utilité de la frénotomie

**Analysis 1.3. Comparison 1 Frenotomy versus no frenotomy or sham procedure, Outcome 3 Maternal nipple pain assessed by a validated pain scale.**

Review: Frenotomy for tongue-tie in newborn infants

Comparison: 1 Frenotomy versus no frenotomy or sham procedure

Outcome: 3 Maternal nipple pain assessed by a validated pain scale



# Utilité de la frénotomie

Autre problème: hétérogénéité importante

- Sham / pas sham
- Echelles d'évaluation
- Âge à la procédure (< 4 mois, < 1 mois, < 3 sem, ???, < 4 sem)

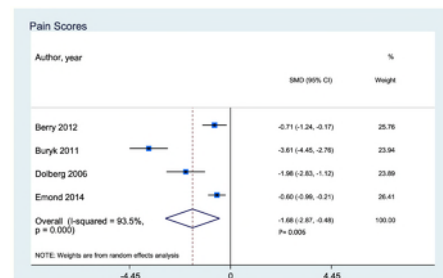
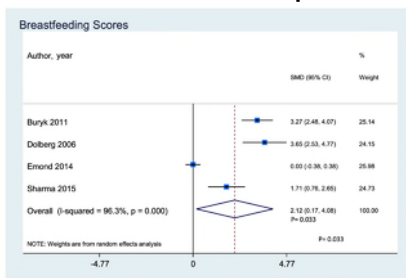
# Utilité de la frénotomie

- Hogan (randomised, non-blinded): 96% amel subjective, contre 3%
- Dollberg (randomise, blinded): amel non significative LATCH-score, amel significative de la douleur
- Buryk (randomised, blinded): amel significative IBFAT-score et douleur
- Berry (randomised, double-blinded): amel significative scores et douleurs
- Emond (randomised, non-blinded): amel HATLFF et BSES, pas d'amel LATCH et IBFAT
- Geddes: amel dynamique aux US et quantité de lait prise
- Amélioration de la douleur constante (Srinivasan et al, Ballard et al, Geddes et al, Argiris et al,...)

## Utilité de la frénotomie

Il semble relativement clair (revues, méta-analyses) que

- Amélioration de la douleur maternelle
- Amélioration de l'efficacité maternelle de la tétée
- Amélioration du LATCH score
- Les mamans / parents sont le plus souvent satisfaits



\* SMD = standardized mean difference

## Utilité de la frénotomie

Il semble relativement clair (revues, méta-analyses) que

- Pas d'amélioration de l'allaitement au sein exclusif à 1 - 3 - 6 mois
- Aide a garder allaitement mixte plutôt que uniquement au lait maternisé

**Table 3: Persistence of exclusive breastfeeding at 1 month of life, 3 months and 6 months in the intervention and non-surgical intervention groups of patients diagnosed with ankyloglossia.**

	Method of Feeding	Method of Feeding		PR	X2 test (95% CI)	p Value
		Intervention N (%)	Non Intervention N (%)			
1 month	By exclusive bottle-feeding	6 (5.0%)	6 (15.39%)	0.32	(0.11 to 0.95)	0.033*
	By mixed feeding	26 (21.7%)	3 (7.69%)	2.82	(0.90 to 8.80)	0.05*
	By exclusive breastfeeding	88 (73.3%)	30 (76.92%)	0.95	(0.78 to 1.17)	0.656 NS
3 months	By exclusive bottle-feeding	8 (6.67%)	8 (20.51%)	0.32	(0.13 to 0.81)	0.013*
	By mixed feeding	31 (25.83%)	3 (7.69%)	3.36	(1.09 to 10.38)	0.016*
	By exclusive breastfeeding	81 (67.5%)	28 (71.8%)	0.94	(0.75 to 1.19)	0.616 NS
6 months	By exclusive bottle-feeding	10 (8.33%)	8 (20.51%)	0.41	(0.17 to 0.96)	0.037*
	By mixed feeding	31 (25.83%)	3 (7.69%)	3.36	(1.09 to 10.38)	0.016*
	By exclusive breastfeeding	79 (65.84%)	28 (71.8%)	0.92	(0.72 to 1.16)	0.491NS

\*Statistically significant ( $p < 0.05$ ). NS = Nonsignificant value ( $p > 0.05$ ); CI = confidence interval; PR = prevalence ratio.

## Que dit la littérature?

- La frénotomie apporte un bénéfice modeste, mais probablement réel au moins sur les douleurs maternelles
- La frénotomie n'apporte pas un bénéfice clair sur le succès d'un allaitement (tout au moins exclusif)
- Une évaluation compétente est indispensable
- Une attitude conservatrice est possible
- Les complications de la frénotomie existent mais sont rares

## Frénotomie ou non?

### Qui dit quoi?

AAP  
UNICEF Baby Friendly  
Initiative



Soc ped Canada  
Soc ped Japon  
Soc ped Hollande

# Frénotomie ou non?

## Efficacité de la frénotomie

- Difficile à établir de façon « blinded »
  - Sham procedure
  - Cross-overs nombreux
  - Hétérogénéité des études
- Difficultés d'allaitement sont d'origine multifactorielles (ankyloglossie plus diagnostiquée chez enfants de mères qui allaitent pour la première fois,...)

# Frénotomie ou non?

- 77% d'amélioration des symptômes
- L'ankyloglossie n'est pas la seule cause des difficultés d'allaitement
- Ne garantit pas succès de l'allaitement
- Faire frénotomie rapidement pour exclure cette cause de difficultés d'allaitement (!)

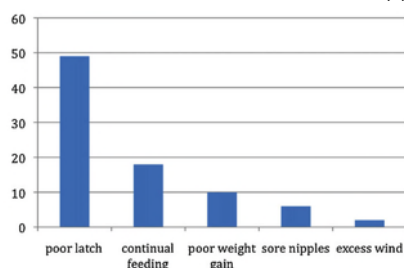


Fig. 2. Presenting symptoms.

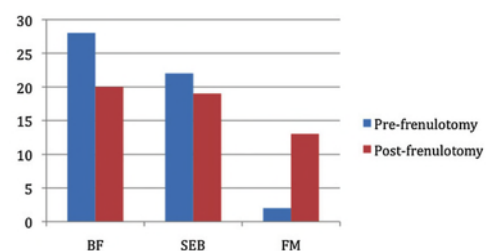


Fig. 3. Pre and post-frenulotomy feeding methods. BF = breast-fed only; SEB = supplemented with expressed breast milk; FM = formula milk only.

## Frénotomie ou non?

### Academy of breastfeeding medicine

- Un frein restrictif peut causer des problèmes fonctionnels qui risquent d'impacter la poursuite de l'allaitement
- Plaintes subjectives et constatations objectives associés
- MAIS ces plaintes, fréquentes, peuvent être attribuées À TORT au frein de langue
- Une attitude conservatrice peut être proposée, mais son efficacité est encore plus mal documentée
- Frénotomie associée à une diminution des douleurs ressenties par les mères
- La présence d'un frein isolé n'est pas une indication

## Frénotomie ou non?

- 34-40 % des infirmières pensent que frein de langue représente un problème pour l'allaitement,... 8% des médecins
- Pas s'association claire entre scoring et allaitement
- Evaluation multidisciplinaire poussée des bébés avec frein et difficultés permet de baisser intervention de 95% à 37 %
- La majorité des patients référés pour une frénotomie bénéficient de stratégies d'intervention alternatives après évaluation complète
- Counseling first, frenulotomy second



## Avis des mères / parents

- Décision conflictuelle
- Peu de discussion des risques
- Expérience pas toujours positive
- Allaiter un enfant avec un frein de langue peut avoir un impact significatif sur le bien-être des mamans, affectant leur santé physique et émotionnelle



### Enquêtes sur échantillons hautement sélectionnés

## Frénotomie ou non? Delphi

**Table 13.** Ankyloglossia and Oral Tie Action Statements for Clinicians.<sup>a</sup>

No.	Statement	Mean	Outliers
10	Breastfeeding difficulties are common in the newborn period and evidence shows that anterior ankyloglossia is a potential contributor to infant feeding problems	7.82	1
12	Maternal pain and poor infant latch can be caused by ankyloglossia but these symptoms can also be present with other etiologies of breastfeeding difficulties	8.73	0
8	Ankyloglossia in an infant should be evaluated by a careful history (including lactation history) and physical examination, including inspection and palpation	8.85	0
22	Before performing a frenotomy on an infant with breastfeeding difficulty, it is appropriate to evaluate the child for other potential head and neck sources of breastfeeding problems such as nasal obstruction, airway obstruction, laryngopharyngeal reflux, and craniofacial anomalies (e.g. cleft palate).	8.00	1
23b	Relative contraindications to infant frenotomy include, but are not limited to, retrognathia, micrognathia, neuromuscular disorder, hypotonia, and coagulopathy.	8.18	0
27	Informed consent for lingual frenotomy should include mention of the possibility of failure to experience improvement in breastfeeding.	8.82	0
30b	Topical anesthetic agents are not recommended prior to infant frenotomy.	7.82	1
30c	Injected anesthetic agents are not recommended prior to infant frenotomy.	7.82	1
30d	Oral sucrose has been shown to decrease pain response in infants undergoing procedures and can be given to an infant prior to undergoing frenotomy.	7.73	1
13b	Ankyloglossia does not typically affect speech.	7.82	1
48b	Ankyloglossia may cause social/mechanical issues in older children (difficulty licking, difficulty keeping teeth clean, lower central incisor diastema, sense of social embarrassment).	7.55	1
15	Presence of an upper lip frenulum is normal in an infant.	8.45	0
17c	Upper lip tie has an unclear relationship to breastfeeding difficulties.	7.27	1
56c	Upper lip frenotomy in infants or children with primary dentition will not prevent the occurrence of an upper interincisor diastema.	7.82	0
36	Surgery to release a "buccal tie" should not be performed.	8.64	1
54	Ankyloglossia does not cause sleep apnea.	8.36	0

<sup>a</sup>This table is a composition of important action items regarding ankyloglossia for clinicians to consider.

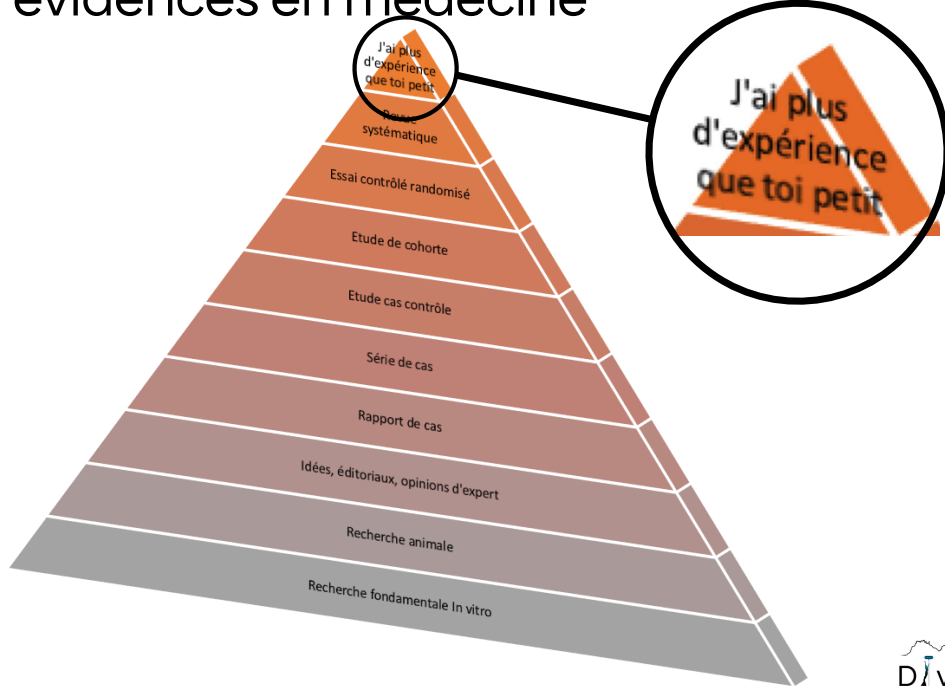
## Quelles conclusions?

*«When there is little evidence that a more radical treatment is better than a conservative one, we believe it is best to choose the option that is least invasive and painful for the child»*

## Que dit la littérature, en conclusion?

- La majorité des nouveau-nés avec un frein de langue n'ont pas de problème
- Le frein de langue est associé avec les problèmes d'allaitement
- Les gradations anatomiques n'a pas de relation avec les difficultés alimentaires des nouveau-nés
- Certaines gradations fonctionnelles ont une relation avec les difficultés alimentaires des nouveau-nés
- La frénotomie apporte un bénéfice modeste mais probablement réel sur les douleurs maternelles
- La frénotomie n'apporte pas un bénéfice clair sur le succès d'un allaitement (tout au moins exclusif)
- Une évaluation compétente est indispensable
- Une attitude conservatrice est possible
- Les complications de la frénotomie existent mais sont rares
- L'encadrement de l'allaitement est capital

# Qualité des évidences en médecine



## Conclusion: proposition d'arbre décisionnel

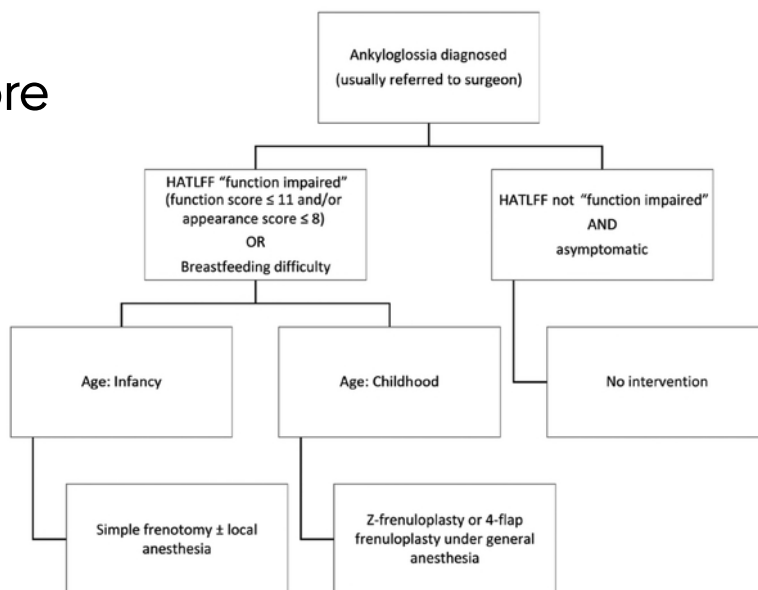


Fig. 8. Algorithm of care for patients with ankyloglossia.

# Conclusion: proposition d'arbre décisionnel

« Garbage in,  
garbage out »???

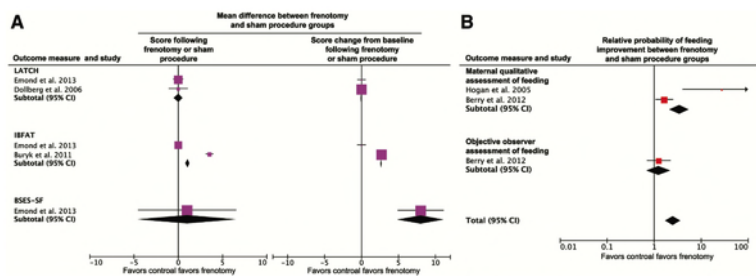


Fig. 3. Validated breastfeeding outcome measure score difference following frenotomy compared to sham (A, left side) and score difference compared to baseline (A, right side.) Validated feeding outcome measure change following frenotomy compared to sham (B).

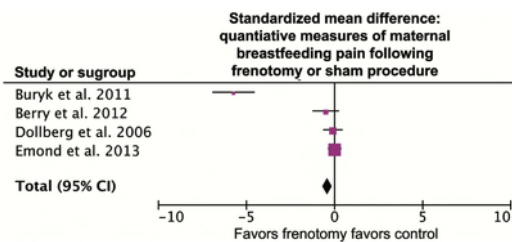


Fig. 6. Combined outcome measures of maternal breastfeeding pain following frenotomy or nondivision.

# Pour la bonne bouche: vision anthropologique

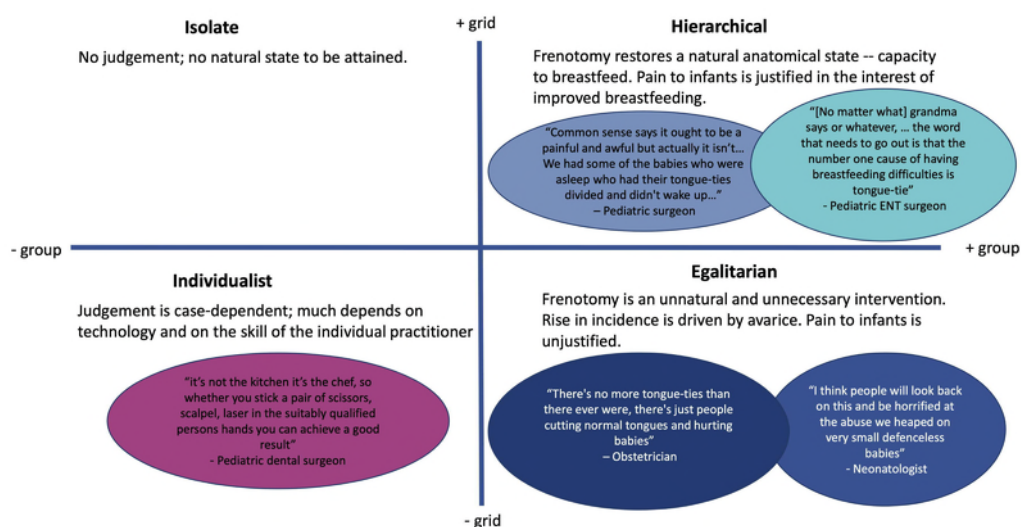


Figure 1. Major positions on frenotomy, per the grid-group typology.

## Autres indications???

## Autres indications

### Impact sur le langage

Pas d'évident substantielle mais indices

- Messner: amel chez 9/11 patients post frénotomie
- Dollberg: troubles de l'articulation 2 X plus fréquents chez enfants sans frénotomie postnatale que avec
- Walls: meilleur développement du langage (identique que si pas de frein de langue anormal) si frénotomie post natale
- MAIS Salt: pas de différence entre patients sans ankyloglossie, ankyloglossie frénectomisée ou ankyloglossie non frénectomisée

Demeure controversé

Systematic review: « no significant data to suggest causative association »

Brooks A et Bowley DM. Tongue tie: the evidence for frenotomy. Early Hum Dev 2014;90:765-768  
Chinnadurai S et al. Treatment of ankyloglossia for reasons other than breastfeeding: a systematic review. Pediatrics 2015;135(6):e1467-e1474  
Webb A et al. The effect of tongue-tie on breastfeeding and speech articulation: a systematic review. Int J Pediatr Otorhinolaryngol 2013;77:635-646  
Salt H et al. Speech production in young children with tongue-tie. Int J Pediatr Otorhinolaryngol 2020;134:1-6  
Dollberg S et al. Evaluation of speech intelligibility in children with tongue-tie. Acta Paediatr 2011;100:e125-e127  
Visconti A et al. A systematic review: the effects of frenotomy on breastfeeding and speech in children with ankyloglossia. Internat J of Speech-Language Pathol. 2021; Early online: 1-15  
Salt H et al. Speech production in young children with tongue-tie. Int J of Ped Otorhinolaryngol. 2020;134:110035

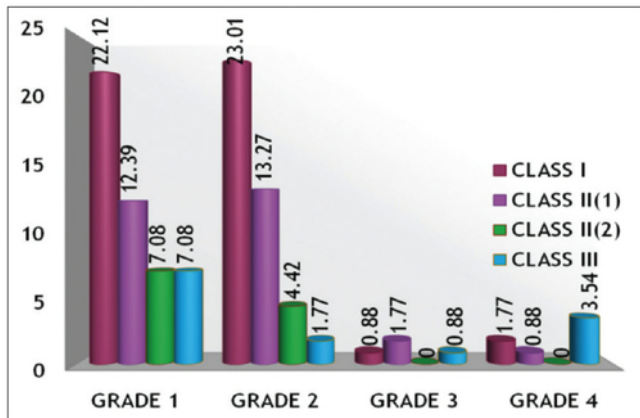
## Autres indications

### Impact sur la dentition

#### Probable

- ▶ Elongation du palais
- ▶ Étroitesse du maxillaire
- ▶ Étroitesse de la mandibule
- ▶ Association entre grade ankyloglossie et type malocclusion

Figure 1: Grades of tongue-tie and its association with malocclusion seen in the total population



Yoon AJ et al. Ankyloglossia as a risk factor for maxillary hypoplasia and soft palate elongation: a functional - morphological study. Orthod Craniofac Res 2017;20:237-244

Srinivasan B et Chitharanjan AB. Skeletal and dental characteristics in subjects with ankyloglossia. Progress in Orthodontics 2013;14:44-50

Vaz AC et Bai PM. Lingual frenulum and malocclusion: an overlooked tissue or a minor issue. Indian J of Dental Research 2015;26:488-492

Calvo-Henriquez C et al. Relationship between short lingual frenulum and malocclusion. A multi center study. Acta Otorrinolaringol Esp. 2022;73:177-183

## Autres indications

### Divers effets évoqués

- ▶ Embrasser (french kiss)
- ▶ Manger glace
- ▶ Jouer instrument à vent
- ▶ Moqueries



Merci pour votre patience et votre attention

