Author’s response to reviews

Title: Effect of frenotomy on breastfeeding variables in infants with ankyloglossia (tongue-tie): a prospective before and after cohort study.

Authors:

Kathryn Muldoon (kmuldoon@tcd.ie)
Louise Gallagher (gallagl8@tcd.ie)
Denise McGuinness (dmcguin@tcd.ie)
Valerie Smith (smithv1@tcd.ie)

Version: 2 Date: 19 Jul 2017

Author’s response to reviews:

PRCH-D-17-00115

Effect of frenotomy on breastfeeding variables in infants with ankyloglossia (tongue-tie): a prospective before and after cohort study.

Response to Reviewers

Dear reviewers,

Many thanks for your valuable comments and for your time in reviewing our paper. We have addressed each comment, point-by-point (bold font), as below. We hope we have addressed these satisfactorily.

Thank you.

Jenny Ingram, PhD (Reviewer 1):

In the background it would be helpful to know at what age the exclusive breastfeeding rate in Ireland is 46%.

- We have added the following: ‘46% on discharge home from the maternity unit following birth (1-4 days postpartum)…’ (Abstract Line 46, and page 6, Line 138)
My main comments revolve around the use of a modified version of the LATCH tool without reference to a publication. The LATCH (as described by Jenson in 1994) is a 5-item (not 6) tool: Latch, Audible swallowing, Type of nipple, Comfort, Hold scored 0, 1, 2. Urine characteristics and infant satiation are not in the LATCH so any overall scoring should use the 5 items and no more to compare with other studies. The use of the additional items need to be clearly described and the differences in scores and any statistical results explained. This also needs to be reflected in the discussion section.

This is an important point; in sourcing a tool for our survey a number of factors influenced the decision, as follows: in attempting to seek permission to use the original LATCH tool we were unable to obtain a response from M. Jensen and were not comfortable in using the tool without permission. Following discussions with C. Davis, where we were informed that the additional two items were suggested to enhance the use of the tool in clinical practice due to the questionable reliability of the original LATCH for assessing breastfeeding (Riordan and Koehn, 1997 which demonstrated interrater reliability of between 0.11 and 0.46). Lastly, when tested for use in an Irish population, the 7-item scale was shown to be valid. For all of these reasons, we chose to use this tool in our survey. That said we do appreciate the importance of comparable data, especially for evidence synthesis. To address your point we have now added the following to our paper:

- Page 9, Lines 195-198: ‘The latter two items were later added to enhance the use of the LATCH tool in clinical practice (C. Davis, personal communication) following an assessment by Riordan and Koehn [21] that questioned the reliability of the LATCH tool, by demonstrating interrater reliability scores of between 0.11 and 0.46, for assessing breastfeeding [21].’ (Reference 21: Riordan J.M. Koehn M. Reliability and Validity Testing of Three Breastfeeding Assessment Tools. JOGNN. 1997, 26:81-187.)

- And to the Discussion, Page 10, Line 314: ‘Significant improvements were found on five of the six individual LATCH scale items and the overall LATCH scale score was significantly higher post-frenotomy. This finding is consistent with previous studies using the original five item scale’

- And lastly, in the Declarations section, under Availability of data and material we have added: ‘For comparability of data, including for evidence synthesis and systematic reviews, with the original 5-item 0-2 LATCH scale, we are happy to provide, on request, anonymised raw data for the first five items in our tool so that these values can be calculated and assessed.’

Table 1: it is rather confusing to include the missing % in the pre-frenotomy feeding rates.
• We have removed the missing % row from the pre-frenotomy column (now Table 2).

Pain on breastfeeding p12:

Second sentence (line 273) needs rewording. Pain scores were reduced when comparing pre to post frenotomy. Also reorder the data in brackets so that it is clear that the first numbers are for pre-frenotomy.

• We have reworded this line to now read: ‘Pain scores were significantly higher pre-frenotomy compared to post-frenotomy’ (now Line 283). The data in the brackets reflect this as: ‘(pre-frenotomy mean 5.6 (SD 3.3) versus post-frenotomy mean 2.7 (SD 2.6); MD -2.90, 95% CI -3.75 to -2.05)’.

Breastfeeding assessment using LATCH p12:

32% of women did not complete the LATCH post-frenotomy. I presume you have taken account of this? Is the tool suitable for self-completion? I have only seen it reported as health professional scored previously.

Yes, the analysis takes account of the reduced numerator in the post-frenotomy data. Our validity testing deemed the scale suitable for self-report and all women completed the pre-procedure tool.

• To add further to this to we have now included on Page 9, Line 205; ‘Testing revealed that the questionnaires took less than 10 minutes for the mother to complete.’

Discussion.

Make sure that you have given references to all studies quoted. There is an overuse of commas in places and a few grammatical errors which I'm sure will be picked up in any revisions.

We have ensured all studies quoted are now referenced (e.g. ref 11 added Line 317)

We have removed a considerable number of commas from this section and proof read again for grammatical errors.
Figures.

The difference between pre-frenotomy and post-frenotomy bars is not obvious when printing in black and white so some differential shading would be helpful. Keep the order consistent between graphs - pre or post first.

We have re-coloured the Figures using black and grey differential shading

We have edited the Figures so all are now labelled consistently (pre-frenotomy first; post-second)

David Todd (Reviewer 2):

In their "background" they mention that using sharp blunt ended scissors without anaesthesia is commonly used. However in their "methods" section, the exact method of division should be described?

The procedure varied as per individual GP/clinicians' practices across the seven primary care units. As we were not surveying healthcare professionals specifically we did not actively seek this information; however we have now retrospectively sought it and have added the information to Table 1 and to Page 8, Line 168 as follows:

- Lines 168-172: For this reason, we are unable to ascertain precise overall tongue-tie incidence rates, however, we are aware that frenotomy procedures varied across settings and have described these in Table 1’.

- Results, Line 224: ‘Table 1 provides the participant's demographic details and information on the frenotomy practitioners and frenotomy procedures.’

- Table 1: Additional rows 1 and 2

In their "background" they mention that "The Canadian Paediatric Society and the Japanese Paediatric Society state that tongue-tie does not present breastfeeding challenges for all infants, and, therefore, do not recommend routine frenotomy [1, 15]. A reference from a British study should be mentioned here and the article by: HOGAN, M., WESTCOTT, C. & GRIFFITHS, M. 2005. Randomized, controlled trial of division of tongue-tie in infants with feeding problems. J Paediatr Child Health, 41, 246-50. Specifically deals with which type of TT causes BF problems

We have added a few extra words to the following sentence, adding also the Hogan reference (18) and have made reference to the NICE (UK) guidance in this section:
• Page 6, Lines 129-131: ‘…..Contrastingly, others suggest that tongue-tie can affect breastfeeding and that a frenotomy procedure will increase infants’ ability to breastfeed successfully, immediately, and for longer durations [16, 17, 18].’

Methods: These following points need to be addressed

No mention of how the TT was divided

Now added to Table 1 (please see response to reviewer 1)

No mention of how the TT was diagnosed

As this was a remote self-report survey, we felt diagnosis might be too medicalised; while we appreciate this is not exactly the same, we used the person recommending the TT as a proxy.

No mention of TT type although the authors did ask the parents to look at pictures of type of TT (Coryllos classification). Showing pictures to parents is a very poor method of deciding what type of TT and the reference they showed only have 3 pictures?

We agree that pictures might not be ideal; however, due to the nature of the survey, we felt that the types of tongue-tie might be better illustrated than using language descriptions. We have added an extra reference to the exact source of the pictures we used in our survey (reference 24) (http://www.brianpalmerdds.com/pdf/cwatson_tongue_presentation.pdf)

No mention of who divided the TT and what was their training

Now included in Table 1

Results:

The demographics are very poorly described.

a. Need gestation of babies, birthweight and especially gender
Participants in this survey were in the community (discharged home from their maternity hospital following birth); we, thus had no access to maternal records to validate these type of data. We thus did not request this information from participants.

b. Need to know the range of when they divided the TT

The range is now provided (Table 1)

c. Need a table

We have now included a table (Table 1) detailing the participant demographics

Was there a difference between those who did or did not return baseline questionnaire

We understand this is an important point, however, as per ethical approval we only had access to self-reported information from those that returned the baseline survey (i.e. those that consented to participation).

Table 1 needs some statistics

We have added z-scores (difference between proportions) and p-values have been added to Table 1 (now Table 2)

Table 2 needs numbers as well as descriptions

We have added numbers to Table 2 (now Table 3)

Figure 1 and 2 needs statistics

We have added numbers to Figures 1 and 2

Figures 1 and 2 should have Pre-frenotomy first and then At follow up
We have edited the Figures so all are now labelled consistently (pre-frenotomy first; post-frenotomy second)

Tongue extension and improvement in BF could be in a table

Thank you for this suggestions; as tongue extension is a pre- and post- variable and improvement is a post-only variable, we felt a Table might not work best and wish to present these separately.

Conclusion: Could be shorter

We have removed a number of lines from the Discussion and Conclusion that we felt could be omitted without losing meaning

Limitations: 281 in seven units over 5 months! What was the birth rate in these units and thus what is the incidence of TT? Needs to be in results!

These seven units are not maternity units/hospitals, rather they are GP/primary care clinics. One of the significant challenges in Ireland is the absence of data linkage between women who, after leaving the maternity hospital, receive follow-up care in the community/primary care setting. Women in Dublin, for example, may birth at different hospitals but attend the same GP. Similarly, for all women who birth at the same hospital they will attend, individually, multiple GPs across the greater Dublin region. This is why we are unable to determine national (or even regional) frenotomy rates. To assist clarify, we have added the following sentences.

• Lines 123-125: ‘For women in the Republic of Ireland (ROI), where frenotomy is mainly performed privately by independent clinicians remote from the maternity hospital setting….’

• Lines 169-171: ‘These clinics are external to the maternity hospitals as community/primary care services with minimal data linkage between postpartum and follow-up infant care. For this reason, we are unable to ascertain precise overall tongue-tie incidence rates, however, we are aware that frenotomy procedures varied across settings and have described these in Table 1.’