Reply to the editor concerning

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LETTER TO THE EDITOR

Reply to the editor concerning: Effect of frenotomy on breastfeeding and reflux: results from the BRIEF prospective longitudinal cohort study

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Dear Editor,

We read the concerns of Paul and Heaton [1] on our assessment of the Efficacy of Frenotomy with regard to Breastfeeding and Reflux Improvement (BRIEF) in infants with breastfeeding problems with great interest. The BRIEF study highlighted the importance of a systematic, sound, and experienced clinical judgment to determine whether surgical treatment might be valid when a non-interventional professional support does not suffice in patients with breastfeeding difficulties [2]. We agree with Paul and Heaton [1] that clinical decision-making should be based on evaluation of the entire evidence base on the subject. Therefore, we advocate that the decision to perform a frenotomy is taken only after a multi-disciplinary team has provided non-interventional support first regarding breastfeeding difficulties, including a thorough oral and physical investigation, and the indication for a frenotomy is not only made on, e.g., the appearance of the anatomy of the tethered oral tissue (regardless of the grading system used). By following the systematic work-up we performed in the BRIEF study [2], the risk of overtreatment or undertreatment can be reduced to the minimum as well as the risk of (severe) complications.

One of the most clinical important findings of our study was that the infants who presented with breastfeeding difficulties all had a combination of a tethered lip-tie and posterior tongue-tie [2]. This means that based only upon the anatomic appearance of oral tethered tissues, it is impossible to predict the amount of breastfeeding problems. From a clinical point of view, the surgical release of the tethered oral tissues resulted in significant improvements of the breastfeeding problems and gastroesophageal reflux; the latter reflux is also related to breastfeeding difficulties. The improvements resulting from frenectomy occurred early and lasted. Improvements were demonstrated in both infants with classic anterior and posterior tongue-ties. Based on this observation, clinicians should mark a posterior tongue-tie as a potential etiology for breastfeeding difficulties in case a tongue-tie is not a classic anterior tongue-tie.

Gastroesophageal reflux is also a common phenomenon in infants, but the differentiation between gastroesophageal reflux and gastroesophageal reflux disease (GERD) can be difficult [3]. Symptoms of reflux are non-specific, and there is increasing evidence that the majority of symptoms may not be acid-related, but are associated with infant gastroesophageal reflux symptoms via aerophagia. Further investigation is warranted between the correlation of oral restrictions and reflux symptoms via aerophagia and not GERD.

Following the strict protocol of non-surgical support by a multidisciplinary team first before deciding to proceed with a frenotomy, we concluded that the frenotomy of a tongue-tie and/or lip-tie is a safe procedure with, in the BRIEF study, no reported post-operative complications, when a non-surgical approach was not effective and when performed by an experienced surgeon [2]. This means that only experienced surgeons should perform these procedures with deep knowledge of the oral anatomy. A frenotomy should be performed as such that no damage is caused to the surrounding tissues and structures. As we thoroughly described in the BRIEF study [2], it is important *not* to disturb the fascia of the underlying genioglossus muscle in case of an anterior or posterior tongue-tie. We do *not* advocate deep submucosal incisions due to the risks of

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damage or bleeding as brought up by Paul and Heaton [1] in their letter to the editor. According to our technique, the maxillary labial frenulum was released off the alveolar ridge up to the mucogingival junction in case of superior lip-tie. If a frenotomy is performed otherwise, there is a much higher risk on complications and unfavorable outcomes as Paul and Heaton [1] pointed out.

We agree there is a need for additional studies. Of note, the Cochrane review of O'Shea et al. [4] and the study of Francis et al. [5] did not mention serious complications after performing a frenotomy. The observations in the case studies regarding complications [6–9], as mentioned in the letter to the editor by Paul and Heaton [1], have to be taken into mind by the surgeons who perform frenectomies, but are not representative for frenectomies performed by experienced surgeons. In the case series cited, the treatment protocol applied, whether a complete oral and physical investigation is performed, and whether a non-interventional professional support by a multi-disciplinary team was in place are not mentioned, all of which could have prevented these complications. Furthermore, many of the mentioned complications in the study using New Zealand Paediatric Surveillance Unit (NZPSU) registry [10] occurred in patients in whom the frenotomy was performed in hospitals. As such, also in hospitals, it is important that only experienced surgeons perform a frenotomy according to a strict surgical protocol in newborns in whom non-surgical support was insufficient and in whom a multidisciplinary team has indicated the frenectomy. When following the protocol described in the BRIEF study [1], no complications after performing a frenotomy were observed in our medical center. Also after 6 months, no complications in oral or motor development, for example, when swallowing of solid foods, were observed. However, the serious consequences of undiagnosed tethered oral tissues at a later age, such as speech problems, swallowing problems, maxillofacial growth problems [11], and pediatric sleep apnea [12], were also seen in our medical center. Therefore, a multidisciplinary team should always be the standard of care for any patient.

To protect, promote, and support the attempt of breastfeeding newborns for at least 6 months as the WHO recommends [13], and to overcome any breastfeeding difficulties during this attempt, should be the goal of any health care professional. If tethered oral tissues are the cause of these breastfeeding difficulties and a non-surgical approach is uneventful, a frenotomy can be a safe procedure resulting in significant improvement of breastfeeding self-efficacy, nipple pain, and gastroesophageal reflux problems, if done cautiously by an experienced surgeon.

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