

Letter to the Editor

Response to Letter Regarding Cordray et al. (2023) and Brief Commentary on the Ankyloglossia Debate

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ABSTRACT

Purpose: Ankyloglossia (tongue tie) is common, and its clinical relevance is hotly debated among multidisciplinary health care providers including pediatricians, lactation consultants, otolaryngologists, and speech-language pathologists. The literature focuses on breastfeeding symptoms; less evidence exists to clarify the spectrum of possible symptoms after infancy. We conducted a scoping review of potentially related symptoms in pediatric patients who presented for clinical evaluation of untreated ankyloglossia, with the aim of mapping symptoms that providers may want to evaluate and identifying targets for further research. Kummer (2025) has alleged “erroneous statements without evidence” about “the effect of ankyloglossia on speech,” “inaccurate citations,” and “errors of omission” in our scoping review (pp. 982, 983). This letter provides a rebuttal of her statements.

Results: Based on results from 20 primary studies, our review drew a provisional conclusion that ankyloglossia may be associated with speech difficulty in a subset of patients; we did not assert any causal relationship. Kummer took issue with a citation in one sentence of our review; we note that some of her concerns were inaccurate, though we appreciate her clinical expertise on speech sound production. The omissions she perceived were in fact present in our original review article.

Conclusions: Kummer’s letter does not warrant an erratum to our scoping review. However, her letter prompts us to urge the multidisciplinary community of providers involved in studying and caring for patients with ankyloglossia to engage in a collaborative and open-minded discussion. We must reduce professional antagonism around this controversy and work together on patient-centered research to support children whose experiences may not fit the typical clinical picture.

We appreciate the opportunity to respond to comments that Kummer (2025) made regarding our 2023 publication, “The Impact of Ankyloglossia Beyond Breastfeeding: A Scoping Review of Potential Symptoms” (Cordray et al., 2023). Kummer’s expertise and influence on the discipline of speech-language pathology is extraordinary, and we respect her differing viewpoint on this topic. We appreciate her expert commentary and feedback on speech

sound production as it may relate to ankyloglossia; we also want to address several incorrect statements and misrepresentations of our work that appear in her letter.

Before responding to specific statements, we wish to emphasize that we chose to perform a scoping review precisely for the purpose of collating existing data and identifying research gaps. Our goal was to synthesize the contents of the existing literature as a guide for ongoing work on this controversial issue. This contrasts with a systematic review or meta-analysis, where the goal is to draw conclusions and affect clinical practice. While we do not necessarily agree with Kummer’s (2025) viewpoint on

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ankyloglossia and speech from a clinical perspective, we do agree that the quality of the existing literature is insufficient to make conclusive statements about causal relationships or how certain pathologies develop. In this scoping review, we intentionally avoided stating that ankyloglossia was responsible for speech issues.

In response to Kummer's (2025) statements, we want to clarify several points. Kummer argues that our paper made "erroneous statements . . . about the effect of ankyloglossia on speech . . . without evidence" (pp. 982, 983), and she claims that we did not reference our statement, "In patients who demonstrated speech difficulties when they presented for ankyloglossia evaluation in childhood, symptoms included articulation difficulty, delayed speech and language development, poor intelligibility, frustration during attempts to communicate, stuttering, mumbling, and lisping. The phonemes /r/, /s/, /th/, /t/, /l/, /n/, and /d/ were commonly affected" (Cordray et al., 2023, pp. 3051, 3054). We opened the paragraph in question by citing the 20 studies that contributed data on speech symptoms, and by directing the reader to Table 2, which logged the speech symptoms reported in each study. The sentence that Kummer quotes then summarized the contents of the table. It was substantiated by the collated data, though we would like to acknowledge here that the primary data on patient symptoms were largely derived from patient-reported outcomes and clinical impressions; these are preliminary findings rather than robust comparative evidence. Especially with patient-/caregiver-reported outcomes, varying patient ages, and lack of control groups, the existing data cannot rule out the reasonable possibility that some of the reported speech errors and delays could stem more from typical developmental delays than from ankyloglossia. We understand that the quality of the studies varies. We therefore accompanied every data point with a systematic assessment of each contributing study's quality and risk of bias, and our review carefully avoided overstepping the bounds of what it could conclude. Although quality assessments are not customary in scoping reviews, we included this component to contextualize the evidence and to guide exclusion of concerningly low-quality literature, with especially stringent criteria for including case reports. Please also note that in our Discussion section, we specifically stated, "The authors would like to caution readers that *the associations identified in this review cannot confirm causal relationships*. Further comparative research is needed to distinguish the contributions of ankyloglossia from other confounders" (Cordray et al., 2023, emphasis added, p. 3060). Further, in our Discussion section, we clearly stated that we do not expect patients to become symptomatic as a rule, and our review did not make blanket statements about all patients with ankyloglossia. Our compilation of reported

complaints should not be interpreted as implying high prevalence of these complaints.

We respect and appreciate Kummer's (2025) richer understanding of the biomechanics of speech production, which exceeds the scope of the primary literature included in this review, as well as our own knowledge as non-speech-language pathologists. Yet we must recognize that, even if certain findings contrast with a reader's viewpoint on how ankyloglossia theoretically should or should not affect speech, those findings reflect real variation among patients' and health care professionals' experiences. We need further study, incorporating the expertise of speech-language pathologists such as Kummer, to parse out the potential contribution of ankyloglossia in these cases—but we cannot simply dismiss these symptoms as unrelated on a theoretical basis. We recognized this in our Discussion section as well:

Rigorous studies that include speech-language pathology, orthodontics, and/or sleep medicine/polysomnography will inform the literature and help produce better data as we continue to debate the decision to proceed with frenotomy or nonsurgical therapies in older children with ankyloglossia. (Cordray et al., 2023, p. 3058)

Our senior author is an otolaryngologist who manages many patients with ankyloglossia. In her experience and in extensive discussions with fellow otolaryngologists and speech-language pathology colleagues, she has observed general agreement that though many cases of ankyloglossia do not cause issues, some situations warrant the belief that restriction of tongue movement does interact with articulation and clarity. Further, in the senior author's experience in communities in other parts of the world, ankyloglossia is primarily treated for speech issues, and we believe that drawing definitive conclusions regarding ankyloglossia and speech requires inclusion of populations who speak different languages and have different craniofacial morphologies.

We would next like to respond to Kummer's (2025) statement that her letter "identifies articles that were incorrectly cited to support these statements" (p. 982). Respectfully, we note that Kummer takes issue with only one citation in one sentence of our review; therefore, the use of plurals here and in her title ("citing errors") thus misrepresents the trustworthiness of our work. In the sentence in question, we stated, "Restricted tongue mobility can interfere with speech sound production, particularly with phonemes that require significant tongue elevation (e.g., /r/, /t/, /l/, and /n/) or protrusion (e.g., /th/; Martinelli et al., 2020)" (Cordray et al., 2023, p. 3058). Kummer argues that "the cited article [Martinelli et al.] is about the assessment of the frenulum, and not about speech" (p. 982).

We acknowledge that Martinelli et al. (2020) did not set out to study speech sound production, and we recognize that our commentary on phonemes in that sentence was based on our limited understanding and search on the topic. We acknowledge that we are not speech-language pathologists, and Kummer's detailed explanations of these speech sounds have improved our understanding. We also want to address Kummer's concerns about referencing within the article that we cited. Kummer contends that the two articles Martinelli et al. (2020) referenced in their sentence about tongue elevation were irrelevant, stating, "What is concerning about the use of these citations is that the effect of ankyloglossia on speech is not mentioned in either of these articles" (p. 983). She states that one reference "discusses the effect of anterior tongue tie on breastfeeding" (p. 983); we reviewed the source article and would like to reassure the reader that Walsh and McKenna Benoit (2019) discuss evidence on speech articulation, oral hygiene, and dentition as well as breastfeeding. We agree that Martinelli et al. (2020) did not base their statement on primary data (likely more on their own clinical experience as speech-language pathologists), and we thank Kummer for her point and expertise on that matter.

Lastly, Kummer (2025) perceives three errors of omission that we would like to rebut as incorrect. Kummer states:

This letter also reveals significant errors of omission, including the results of the systematic review from the Agency for Healthcare Research and Quality, which found that there is insufficient evidence to conclude that ankyloglossia affects speech. Another omission was the consensus statement from the American Academy of Otolaryngology–Head and Neck Surgery Consensus Report, which states that ankyloglossia does not typically affect speech. (p. 982)

Kummer (2025) also mistakenly states that we failed to report the results of a study whose outcomes were described in our Results section. We would like to reassure our readers that our reporting was balanced, and we did not omit any of this literature from our review.

1. Our review article reaffirmed the conclusions of the Agency for Healthcare Research and Quality (AHRQ) systematic review on ankyloglossia. We cited Chinnadurai et al. (2015) multiple times, recognizing their work in the AHRQ systematic review in our Introduction:

One previous systematic review addressed the efficacy of frenotomy for nonbreastfeeding outcomes (Chinnadurai et al., 2015), but the baseline prognosis

of ankyloglossia after infancy has yet to be well characterized. Clinicians agree that some older children may experience speech, social, and mechanical concerns associated with ankyloglossia (Messner et al., 2020). Clinical practice guidelines are unavailable because high-quality, comparative research on symptom management after infancy is lacking (Chinnadurai et al., 2015; Messner et al., 2020). More complete understanding of the scope of sequelae during childhood and adolescence would help inform continued evaluation and management for patients who did not require early frenotomy. (Cordray et al., 2023, p. 3049)

Further, we concluded our Discussion section by referencing that same work's conclusions about the lack of good-quality studies and the currently limited evidence base for the effect of surgical interventions to improve speech outcomes. The final remarks of our review were as follows:

Although it is possible that frenotomy, frenectomy, or frenuloplasty may improve quality of life in the subset of patients who experience significant speech, eating, swallowing, sleep, and social difficulties, a continuing need exists for high-quality, controlled efficacy research on prevalence of and surgery for the symptoms that our review identified in older children (Messner et al., 2020; Chinnadurai et al., 2015). (Cordray et al., 2023, p. 3060)

2. Regarding the American Academy of Otolaryngology–Head and Neck Surgery consensus statement (Messner et al., 2020), the second paragraph of our Discussion section mentioned this consensus statement verbatim:

Much of the existing literature on ankyloglossia in older children focused on speech outcomes. *An AAO-HNS expert panel reached clinical consensus that ankyloglossia does not typically affect speech.* In our review of patients who were evaluated after infancy for clinical symptoms, some presented with speech difficulties such as impaired articulation and intelligibility, although the data do not suggest that this outcome is typical. (Cordray et al., 2023, p. 3058, emphasis added)

In this paragraph of our review, we acknowledged that our results support the view that ankyloglossia does not typically affect speech.

3. Kummer (2025) states,

Finally, they do not report the following conclusions from the recent study by Melong et al. (2024), which

they cite and reference. This study's conclusion is as follows: "The majority of children being referred for speech concerns thought to be due to ankyloglossia had age-appropriate speech errors at presentation. Ankyloglossia was not associated with isolated tongue mobility related speech articulation errors in a consistent manner, and there was no benefit of tongue-tie release in improving speech articulation or intelligibility." (Kummer, 2025, p. 984, emphasis added)

We note that Melong et al. (2024) was first published online in 2021 and was cited as such in our scoping review. In the final paragraph of our Results section on speech outcomes, we did in fact describe the results of that study and addressed that it found no benefit of frenotomy for articulation or intelligibility:

A medium-quality pre-post study did not detect significant improvement in phonology on the Goldman-Fristoe Test of Articulation-Second Edition or naïve-listener-rated speech intelligibility 1 month after frenotomy ($n = 25$ patients, 2–7 years of age; Melong et al., 2024). (Cordray et al., 2023, p. 3054)

In summary, we feel confident in the findings that we reported in our scoping review, recognizing that this type of study aims to identify where the literature needs to grow. Ultimately, we found that, across multiple symptoms in childhood that have been reported to be at least partially attributable to ankyloglossia, existing research is lacking in both volume and quality. However, this does not equate to a conclusion that there is no relationship between tongue tie and these pathologies; to us, it simply means that further exploration is essential to reach answers.

We believe that, as researchers and clinicians working on this hotly debated topic of ankyloglossia, we must weigh results and conclusions from researchers spanning the spectrum of professional perspectives on the condition. Our individual stances on this debate can color how we read and perceive new data. We can harness our strong opinions to enrich discussion of how to close research gaps and care for patients, but we must first seek to open up our own understanding of the issue to accommodate and reconcile all of the evidence. If we reject results that do not fit cleanly into our concept of ankyloglossia, we run the risk of dismissing real symptoms that a subset of children may experience or alternatively oversimplifying

the root cause of potential symptoms where ankyloglossia may not be the only answer and frenotomy may not provide a complete solution. We must remain open-minded and continue to push one another to do better research so we can answer these questions without allowing public opinion and social media to control the narrative. We should include experts from multiple disciplines, as well as caregivers, in the conversation to bring their expertise and experience to the table. We all share the same goal of helping children achieve the highest quality of life possible. We look forward to the opportunity to engage with speech-language pathologists, dentists, sleep medicine physicians, occupational therapists, pediatricians, other otolaryngologists, and other providers for a comprehensive and in-depth discussion as opportunities arise.

References

- Chinnadurai, S., Francis, D. O., Epstein, R. A., Morad, A., Kohanim, S., & McPheeters, M. (2015). Treatment of ankyloglossia for reasons other than breastfeeding: A systematic review. *Pediatrics*, *135*(6), e1467–e1474. <https://doi.org/10.1542/peds.2015-0660>
- Cordray, H., Mahendran, G. N., Tey, C. S., Nemeth, J., & Raol, N. (2023). The impact of ankyloglossia beyond breastfeeding: A scoping review of potential symptoms. *American Journal of Speech-Language Pathology*, *32*(6), 3048–3063. https://doi.org/10.1044/2023_AJSLP-23-00169
- Kummer, A. W. (2025). Incorrect statements and citing errors regarding the effect of ankyloglossia on speech in Cordray et al., 2023. *American Journal of Speech-Language Pathology*, *34*(2), 982–984. https://doi.org/10.1044/2024_AJSLP-24-00231
- Martinelli, R. L. de C., Marchesan, I. Q., & Berretin-Felix, G. (2020). Tongue position for lingual frenulum assessment. *Revista CEFAC*, *22*(1), Article e0120. <https://doi.org/10.1590/1982-0216/20202210120>
- Melong, J., Bezuhly, M., & Hong, P. (2024). The effect of tongue-tie release on speech articulation and intelligibility. *Ear, Nose, & Throat Journal*, *103*(7), NP450–NP454. <https://doi.org/10.1177/01455613211064045>
- Messner, A. H., Walsh, J., Rosenfeld, R. M., Schwartz, S. R., Ishman, S. L., Baldassari, C., Brietzke, S. E., Darrow, D. H., Goldstein, N., Levi, J., Meyer, A. K., Parikh, S., Simons, J. P., Wohl, D. L., Lambie, E., & Satterfield, L. (2020). Clinical consensus statement: Ankyloglossia in children. *Otolaryngology-Head and Neck Surgery*, *162*(5), 597–611. <https://doi.org/10.1177/0194599820915457>
- Walsh, J., & McKenna Benoit, M. (2019). Ankyloglossia and other oral ties. *Otolaryngologic Clinics of North America*, *52*(5), 795–811. <https://doi.org/10.1016/j.otc.2019.06.008>