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# Response to “Osteopathic manipulative techniques in the treatment of vestibular dizziness not related to the cervical spine”

<https://doi.org/10.1515/jom-2023-0010>

Received January 9, 2023; accepted January 29, 2023;

published online March 20, 2023

To the Editor,

We read with interest the letter by Álvarez et al. [1], and we thank and appreciate them for the supportive feedback. Their feedback and comments were very cogent and insightful. However, there were a few issues on which we would like to share our thoughts.

Regarding the consensus on the definition of cervicogenic dizziness, we found inconsistent definitions within the reviewed articles. All studies that specifically defined cervicogenic dizziness as a form of vertigo caused by vascular impingement within the cervical spine were excluded from the study. We stated this in our published protocol as an exclusion criterion [2]. Consistent with our inclusion of neuro-otological disorders, studies that defined cervicogenic dizziness as an impaired or altered interaction between cervical proprioceptive input and vestibular function met our inclusion criteria.

In our published protocol [2], we stated that we would perform sensitivity analysis specific to the neuro-otological condition, provided that the intervention is reported in two or more studies. We did not have enough studies to perform sensitivity analysis based on the specific condition type and OMT. In our review, we critically appraised the published literature that explored the effectiveness of OMT in various neuro-otological disorders and reported them narratively, because we could not do

the pooling for those disorders. We provided our conclusion based on the overall published literature and not only on the three pooled analyses. The quality of evidence in our pooled analysis was moderate [3]. According to the Grading of Recommendations, Assessment, Development, and Evaluations (GRADE) criteria [4], with moderate quality evidence, further research is likely to impact confidence in the estimate of effect and may change the estimate.

We agree with Alvarez et al.'s feedback that OMT and analogous techniques should be part of a comprehensive therapeutic approach to neuro-otological disorders. As we performed a systematic review and meta-analysis, our focus was on providing evidence about the effectiveness of OMT and analogous techniques in the management of dizziness due to the neuro-otological causes. Recommendations about the treatment protocols are informed by the guidelines, which was beyond the scope of this review. Our study provided a moderate quality of evidence for the inclusion of OMT in the management of neuro-otological conditions. Future studies will be needed to define condition-specific recommendations.

**Research funding:** None reported.

**Author contributions:** All authors provided substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; all authors drafted the article or revised it critically for important intellectual content; all authors gave final approval of the version of the article to be published; and all authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

**Competing interests:** None reported.

## References

1. Alvarez G, Lucas S, Roura S. Osteopathic manipulative techniques in the treatment of vestibular dizziness not related to the cervical spine. *J Osteopath Med* 2023;123:273–6.
2. Rehman Y, Kirsch J, Bhatia S, Johnston R, Bingham J, Senger B, et al. Impact of osteopathic manipulative techniques on the management of dizziness

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- caused by neuro-otologic disorders: protocol for systematic review and meta-analysis. *Int J Osteopath Med* 2021;42:76–82.
3. Rehman Y, Kirsch J, Wang MY, Ferguson H, Bingham J, Senger B, et al. Impact of osteopathic manipulative techniques on the management of dizziness caused by neuro-otologic disorders: systematic review and meta-analysis. *J Osteopath Med* 2023;123:91–101.
  4. Atkins D, Best D, Briss PA, Eccles M, Falck-Ytter Y, Flottorp S, et al. Grading quality of evidence and strength of recommendations. *BMJ* 2004;328:1490.