



Ultrasound evaluation of optic nerve sheath diameter in relation to propofol and inhalational anesthetics in patients having surgery in the Trendelenburg position

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Comment on: Yang J, Yang X, Li X, *et al.* Effects of propofol and inhalational anesthetics on the optic nerve sheath diameter in patients undergoing surgery in the steep Trendelenburg position: a systematic review and meta-analysis. *Ann Palliat Med* 2021;10:10475-85.

Submitted Jan 15, 2023. Accepted for publication Jan 29, 2023. Published online Feb 14, 2023.

doi: 10.21037/apm-22-1301

View this article at: <https://dx.doi.org/10.21037/apm-22-1301>

We read with great interest the review and metanalysis by Yang *et al.* concerning the effects of propofol and inhalational anesthetics on the optic nerve sheath diameter (ONSD) in patients undergoing surgery in the steep Trendelenburg position (1).

We laud our colleagues for the brilliant paper, but we would like to offer them some observation.

In this article the colleagues have observed that the ONSD was lower during propofol anesthesia than during inhalational anesthesia after adopting the Trendelenburg position and CO₂ pneumoperitoneum, suggesting that propofol anesthesia may help to minimize intracranial pressure (ICP) changes compared with inhalational anesthetics.

As the authors did not report the ventilation technique utilized in the studies that they analyzed, we were wondering if the difference of increase in ONSD could have a relation to the ventilation technique and not only to the type of anesthesia.

Karaca found the ONSD after anesthesia's induction was significantly lower in the pressure-controlled ventilation (PCV) mode than in the volume-controlled ventilation (VCV) mode (2).

The explanation for such differences could be the choice to utilizing B scan technique to measure the ONSD.

We are conscious that evaluation of the ONSD by US

B scan has been applied as a non-invasive technique to identify an increased ICP, but unfortunately a considerable number of artefacts could make that evaluation not strictly accurate (3,4). Unluckily, even considering the suggestion to image the central retinal artery with color Doppler (5) these complications cannot be surmounted.

To avoid these complications, in future studies, we suggest a more accurate investigation could have been achieved with the so-called standardized A scan technique (6-8).

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was a standard submission to the journal. The article did not undergo external peer review.

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <https://apm.amegroups.com/article/view/10.21037/apm-22-1301/coif>). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all

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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.

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Cite this article as: Graziano M, Di Paola I, Marotta G. Ultrasound evaluation of optic nerve sheath diameter in relation to propofol and inhalational anesthetics in patients having surgery in the Trendelenburg position. *Ann Palliat Med* 2023;12(3):618-619. doi: 10.21037/apm-22-1301