LETTER TO THE EDITOR

Effect of Percutaneous Tracheostomy on Optic Nerve Sheath Diameter (TONS Trial)

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To the Editor

We read with great interest the article by Kapoor et al. concerning the effect of percutaneous tracheostomy (PCT) on optic nerve sheath diameter (ONSD).[1]

We congratulate the authors for their very interesting study, but we would like to make some comments.

In this paper, the authors found an increase in the ONSD during elective PCT in neurocritical ill patients.

Geng et al. described an increase in the ONSD in patients that underwent anesthesia with propofol compared to patients that underwent anesthesia with sevoflurane.[2]

As the authors utilized propofol and sevoflurane for the anesthesia, we were wondering if the increase in ONSD is really surgical procedure related or it could be related to the anesthesia.

Maybe it could be useful for further studies to check if utilizing different anesthetic procedures, same results can be obtained.

Another point is that the cutoff value observed in this study was considerably different from previously reported studies. The reason for this could be related to the use of B-scan that is affected by several limitations due to the lack of standardization and presence of artifacts.[3,4] Unfortunately, even taking into account the advice to image the central retinal artery with color Doppler these problems cannot be overcome.

For this reason, to prevent these artifacts, we suggest, in case of future studies, to use the so-called standardized A-scan technique.[5]

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References

1. Kapoor I, Wanchoo J, Mahajan C, Singhal V, Roy H, Kumar S, et al. Effect of percutaneous tracheostomy on optic nerve sheath diameter [TONS Trial]. Indian J Crit Care Med 2021;25(4):382–387. DOI: 10.5005/jp-journals-10071-23783.
2. Geng W, Chen C, Sun X, Huang S. Effects of sevoflurane and propofol on the optic nerve sheath diameter in patients undergoing laparoscopic gynecological surgery: a randomized controlled clinical studies. BMC Anesthesiol 2021;21(1):30. DOI: 10.1186/s12871-021-01243-7.
3. De Bernardo M, Vitiello L, Rosa N. Ultrasound optic nerve sheath diameter evaluation in patients undergoing robot-assisted laparoscopic pelvic surgery. J Robot Surg 2019;13(5):709–710. DOI: 10.1007/s11701-019-00966-7.
4. De Bernardo M, Vitiello L, Rosa N. Optic nerve evaluation in idiopathic intracranial hypertension. Am J Neuroradiol 2019;40(7):E36. DOI: 10.3174/ajnr.A6091.
5. Rosa D, Graziano M, Di Paola I. Evaluation of intracranial pressure during neural laser discectomy. Pain Physician J 2022;25(2):E414. PMID: 35323006.