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The Author's Response: Evaluation of Propofol in Comparison with Other General Anesthetics for Surgery in Children Younger than 3 Years: a Systematic Review and Meta-Analysis

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► See the letter "Letter to the Editor: Is Propofol Good Choice for Procedural Sedation?: Evaluation of Propofol in Comparison with Other General Anesthetics for Surgery in Children Younger Than 3 Years" in volume 34, number 28, e191.

We thank the author for the interest in our article entitled "Evaluation of propofol in comparison with other general anesthetics for surgery in children younger than 3 years: a systematic review and meta-analysis"¹ and for sharing his views. We acknowledge the potential concerns raised in the letter, and we therefore would like to address a couple of issues further in response to the specific questions asked.

With regard to the length of propofol use, it was 10 to 20 seconds when it was used for induction in the three studies included in the analysis, and when it was used for maintenance the duration of anaesthesia ranged from 12 to 232 minutes in the other three studies. Our analysis concluded that propofol did not suggest any significantly higher risk than other options used, in terms of the evaluated adverse events that included hypotension. Other symptoms or conditions related to the propofol infusion syndrome were not reported in those randomized clinical trials (RCTs). It may be due to well controlled administrations and therefore it still is a worthwhile warning about the potential outcomes concerned, particularly in relation to the regimens such as doses.

The letter also pointed out that 10.7% of the propofol group and 7.1% of the sevoflurane group experienced post-operative nausea and vomiting with a concern of higher proportion in the propofol group. The referred proportion, with more than 3 percent difference, might offer such an impression. However, it was in fact based on one patient difference out of 28.² What the results statistically suggest is that such a difference could be observed purely by chance (P value = 0.639).

Finally in regard of using propofol for procedural sedation in children, we would like to make it clear that we sought to evaluate the overall safety of propofol use for general anesthesia for

surgery in young children in the referred article. The terminology for propofol sedation or anaesthesia is often confusingly used because sedation is a continuum and children can easily slip into a deeper level.³ Although it is a related issue, the concerns about propofol sedation for procedures in children had better be considered separately and should be reviewed within a separate framework. In fact, there were a greater number of RCTs existing in the literature for this question and we have also conducted a systematic review and meta-analysis for this. The manuscript is underway and the results will be published as a subsequent paper.

As a concluding remark, we would like to underline the fact that the current systematic review was conducted based on six RCTs with its key questions and this may not answer a full range of clinical questions. Since the included studies were RCTs, the meta-analysis has its own merits inherited from the RCTs but yet it has limitations due to the small number with limited information. In that respect, further information utilizing other types of observational studies should also be considered along with what this systematic review suggested, but with caution.

REFERENCES

1. Hong H, Hahn S, Choi Y, Jang MJ, Kim S, Lee JH, et al. Evaluation of propofol in comparison with other general anesthetics for surgery in children younger than 3 years: a systematic review and meta-analysis. *J Korean Med Sci* 2019;34(15):e124.
[PUBMED](#) | [CROSSREF](#)
2. Cohen IT, Finkel JC, Hannallah RS, Goodale DB. Clinical and biochemical effects of propofol EDTA vs sevoflurane in healthy infants and young children. *Paediatr Anaesth* 2004;14(2):135-42.
[PUBMED](#) | [CROSSREF](#)
3. Cravero JP, Beach ML, Blike GT, Gallagher SM, Hertzog JH; Pediatric Sedation Research Consortium. The incidence and nature of adverse events during pediatric sedation/anesthesia with propofol for procedures outside the operating room: a report from the Pediatric Sedation Research Consortium. *Anesth Analg* 2009;108(3):795-804.
[PUBMED](#) | [CROSSREF](#)