

COMMENT

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Postoperative airway morbidities in pediatric patients

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Abstract

Pediatric airway management is a huge challenge for anaesthetists, and airway-related complications should be actively addressed and focused on.

Keywords Pediatric patients, Airway assessment, Postoperative sore throat

In a recent prospective observational cohort study, Assefa et al. [1] discovered that endotracheal tube cuff inflation with lidocaine could reduce hemodynamic responses and post-operative airway morbidities in pediatric patients when compared to cuff inflation with air. Their discovery had clinical implications. In addition to the shortcomings mentioned in the article, the authors should address several methodological issues.

First, it was known that pediatric airway management seems to be more challenging for anaesthetists than the adults, so we'd like to know whether preoperative airway assessment was performed in this study and if there was difficult airway. Furthermore, the study did not describe whether video laryngoscope or direct laryngoscope was used, the type of endotracheal tube, the use of stylets, or the number of attempts. Reliable evidence that the number of attempts and the use of various airway management tools were strongly related to postoperative airway complications [2].

Second, The authors did not standardize the extubation protocol, including whether suction was performed before and during extubation, as well as the pressure and

frequency of suction, all of which were unknown variables that could potentially and significantly skew their findings. Furthermore, the authors did not classify the patients' degree of postoperative sore throat, which could easily be assessed using the Prince Henry Pain Scale [3].

Third, the pediatric patients received thiopentone, suxamethonium, isoflurane, vecuronium for anesthetic induction and maintenance, but the authors did not specify which opioids were used for induction and maintenance, as well as the total amount of opioids. There was reliable evidence that using opioids such as sufentanil and remifentanyl before and during extubation reduced haemodynamic fluctuation and coughing response [4][5].

Finally, the patients' satisfaction and postoperative recovery, which were absolutely essential to pediatric prognosis and their families, ought be evaluated using the QoR-15 [6]. We believe that the study's transparency could be enhanced if the authors provide more pertinent data.

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None.

Authors' contributions

Sun Zhongpeng drafted the manuscript. Yang Dong carefully read and revised the manuscript and is the corresponding author. All the aforementioned authors read and approved the final version of the manuscript.

Data Availability

Not applicable.

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Declarations

Ethics approval and consent to participate

Not applicable

Consent for publication

Not applicable

Competing interests

The authors declare no competing interests.

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References

1. Biniam Assefa H, Samuel F, Fentie T, Daniel A, Hika B, Aberra, Belete Alemu. Effect of tracheal tube cuff inflation with alkalized lidocaine versus air on hemodynamic responses during extubation and post-operative airway morbidities in children: prospective observational cohort study, Ethiopia. *BMC Anesthesiol.* 2022;22(4):337.
2. Park R, Peyton JM, Fiadjoe JE, Hunyady AI, Kimball T, Zurakowski D, Kovatsis PG. The efficacy of GlideScope® videolaryngoscopy compared with direct laryngoscopy in children who are difficult to intubate: an analysis from the paediatric difficult intubation registry. *Br J Anaesth.* 2017;119(1):984–92.
3. Torda TA, Pybus DA. Extradural administration of morphine and bupivacaine. A controlled comparison. *Br. J Anaesth.* 1984;56(2):141–6. <https://doi.org/10.1093/bja/56.2.141>.
4. Mahoori A, Noroozina H, Hasani E, Karami N, Pashaei N, Sanaz Hatami. The effect of low-dose remifentanyl on the hemodynamic responses of endotracheal extubation. *Acta Med Iran.* 2014;52(11):844–7.
5. Lee JY, Lim BG, Park HY, Nan Sook Kim. Sufentanil infusion before extubation suppresses coughing on emergence without delaying extubation time and reduces postoperative analgesic requirement without increasing nausea and vomiting after desflurane anesthesia. *Korean J Anesthesiol.* 2012;62(6):512–7.
6. Peter A, Stark PS, Myles JA, Burke, et al. Development and psychometric evaluation of a postoperative quality of recovery score: the QoR-15. *Anesthesiology.* 2013;118(6):1332–40.

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