



In reply: Do endotracheal tubes with subglottic suction devices cause airway injury?

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Received: 28 March 2023 / Revised: 28 March 2023 / Accepted: 28 March 2023 / Published online: 6 June 2023
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Keywords endotracheal tubes · subglottic suction devices · tracheal injury

To the Editor,

We would like to thank Drs Lee and Choi¹ for their interest in our study. As they correctly point out, patients who were previously intubated were included in this study, and tracheal injury could have occurred with previous intubations. Ideally, the airway including the subglottic region and trachea would have been visualized in all patients at the time of intubation to evaluate for evidence of injury, and again at tracheostomy to assess changes. Unfortunately, there are practical and clinical reasons that made this difficult to do. In addition, many patients (26/57, 46%) were intubated outside of the intensive care unit in urgent or emergent circumstances, limiting the ability to evaluate the airway at the time of intubation. In addition, as many of the initial intubations occurred in other institutions, we were unable to capture details such as medications used, neuromuscular blockade, and number of attempts. Excluding patients with previous intubations and patients who had been intubated more than once during the current admission would have removed more than half of the patients, limiting the ability to draw meaningful conclusions.

Our study was not designed to be definitive but highlights the importance of further study into this important but understudied area. In future studies, the

points raised by Drs Lee and Choi will be important characteristics to capture. Similarly, we agree that further studies on suction methods (intermittent *vs* continuous) need to be conducted, although the study by Seguin *et al.*, which compared intermittent to continuous suction, found similar patterns and rates of injury regardless of suction method.² Further study of the long-term implications of the airway injuries noted needs to be done along with the study of methods to mitigate them.

Disclosures None.

Funding statement None.

Editorial responsibility This submission was handled by Dr. Stephan K. W. Schwarz, Editor-in-Chief, *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*.

References

1. Lee S, Choi JH. Do endotracheal tubes with subglottic suction devices cause airway injury? *Can J Anesth* 2023; <https://doi.org/10.1007/s12630-023-02516-0>
2. Seguin P, Perrichet H, Pabic EL, *et al.* Effect of continuous versus intermittent subglottic suctioning on tracheal mucosa by the mallinckrodt taperguard evac oral tracheal tube in intensive care unit ventilated patients: a prospective randomized study. *Indian J Crit Care Med* 2018; 22: 1–4. https://doi.org/10.4103/ijccm.ijccm_350_17

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