



Difficult Airway and Cannot Intubate, Cannot Ventilate Situations in Korea: What Can We Do in the Future?

Tak Kyu Oh

Department of Anesthesiology and Pain Medicine, Seoul National University Bundang Hospital, Seongnam, Korea

Dear Editor:

I have read the article entitled “A Pilot Survey of Difficult Intubation and Cannot Intubate, Cannot Ventilate Situations in Korea” published by Kim et al. [1] in the Korean Journal of Critical Care Medicine in August 2016, with great interest. An official survey on difficult intubations is still a very meaningful pilot study in Korea. The authors suggested that the video laryngoscope is the most preferred modality among Korean anesthesiologists and intensivists for “Cannot Intubate, Cannot Ventilate (CICV)” and difficult intubation conditions. This preference reflects the results from a 2013 report of a survey performed in Canada [2]. I believe that these findings are valuable and should be actively applied in special conditions, such as in the intensive care unit (ICU).

In general, patients in the ICU exhibit signs and symptoms of acute respiratory distress syndrome and sepsis. These patients lack a physiologic reserve when compared to other patients, and are often facing life-threatening conditions. Moreover, a difficult airway occurs more often outside the operating room, while the rate of incidence is 11% to 22% in critically ill patients [3,4]. Therefore, when compared to patients who undergo tracheal intubation for elective surgery in the operating room [1], it is more important to accurately predict a difficult airway and be successful on the first attempt at intubation in ICU patients [5]. Thus, if a difficult airway condition is predicted in ICU patients, it is necessary to proactively use the video laryngoscope on the first intubation attempt [6]. A prior prospective study reports that the use of the C-MAC[®] video laryngoscope (Karl Storz, Tuttlingen, Germany), over the Macintosh blade, has increased the success rate of the first attempt at tracheal intubation in ICU patients suspected of having a difficult airway from 55% to 79% [7]. In light of these trends, intensive care staff in Korea should consider proactively assessing for difficult airways and using a video laryngoscope before a CICV situation ensues.

Received on February 2, 2017

Revised on February 24, 2017

Accepted on March 9, 2017

Tak Kyu Oh

Department of Anesthesiology and Pain Medicine, Seoul National University Bundang Hospital, 82 Gumi-ro 173beon-gil, Bundang-gu, Seongnam 13620, Korea

Tel: +82-31-787-7499

Fax: +82-31-787-4063

E-mail: airohtak@hotmail.com

*No potential conflict of interest relevant to this article was reported.

The first point to consider is that the survey in the study by Kim et al. [1] was based on the clinicians' individual experiences and preferences. A prospective study, hence, is needed for achieving more objective outcomes. In addition, the outcomes of this study were limited to unanticipated difficult airway and CICV situations, not anticipated difficult airways. The results could be different when applying them to anticipated difficult airways, and this should be considered in future studies.

Furthermore, there is no comment on whether the clinical situation was managed using a team approach. A team approach is an important issue because when attempting tracheal intubation in critically ill patients suspected of having a difficult airway, cooperation among multiple experts, including intensivists and surgeons, is needed [5]. Despite the ongoing debate about the actual effectiveness of the rapid response team in management of difficult airway patients, a recent report focused on the introduction of the difficult airway response team (DART), which is comprised of anesthesiologists, otolaryngologists, trauma surgeons, and emergency medicine physicians, and their role in securing the airway in difficult airway patients [8]. More specifically, the role of otolaryngologists in the DART is becoming more significant and these changes are likely to occur in Korea in the near future [9]. When faced with situations such as dealing with a difficult airway or CICV, a team approach provides the clinicians with opportunities to make judgments that may be different from what they would have made working alone.

In conclusion, the survey by Kim et al. [1] is a valuable study that shows, for the first time, the preference of Korean anesthesiologists and intensivists for CICV and difficult airway patients. However, as mentioned before, there were limitations, including the retrospective nature of the study and difficulties in immediately applying the findings clinically. Therefore, in the near future, a multicenter retrospective study with a large sample size in a clinical setting in Korea, as well as a well-designed prospective study, are needed. Furthermore, additional research on programs such as DART, which directly pre-

dicts the possibility of a difficult airway in a critically ill patient and allows experts of multiple disciplines to collaborate to solve a problem, should be performed.

References

1. Kim JS, Lim HK, Song JY, Lim HK, Song KC, Cho JH. A pilot survey of difficult intubation and cannot intubate, cannot ventilate situations in Korea. *Korean J Crit Care Med* 2016;31:202-7.
2. Wong DT, Mehta A, Tam AD, Yau B, Wong J. A survey of Canadian anesthesiologists' preferences in difficult intubation and "cannot intubate, cannot ventilate" situations. *Can J Anaesth* 2014;61:717-26.
3. Le Tacon S, Wolter P, Rusterholtz T, Harlay M, Gayol S, Sauder P, et al. Complications of difficult tracheal intubations in a critical care unit. *Ann Fr Anesth Reanim* 2000;19:719-24.
4. Jaber S, Amraoui J, Lefrant JY, Arich C, Cohendy R, Landreau L, et al. Clinical practice and risk factors for immediate complications of endotracheal intubation in the intensive care unit: a prospective, multiple-center study. *Crit Care Med* 2006;34:2355-61.
5. Lavery GG, McCloskey BV. The difficult airway in adult critical care. *Crit Care Med* 2008;36:2163-73.
6. Apfelbaum JL, Hagberg CA, Caplan RA, Blitt CD, Connis RT, Nickinovich DG, et al. Practice guidelines for management of the difficult airway: an updated report by the American Society of Anesthesiologists Task Force on Management of the Difficult Airway. *Anesthesiology* 2013;118:251-70.
7. Noppens RR, Geimer S, Eisel N, David M, Piepho T. Endotracheal intubation using the C-MAC® video laryngoscope or the macintosh laryngoscope: a prospective, comparative study in the ICU. *Crit Care* 2012;16:R103.
8. Mark LJ, Herzer KR, Cover R, Pandian V, Bhatti NI, Berkow LC, et al. Difficult airway response team: a novel quality improvement program for managing

- hospital-wide airway emergencies. *Anesth Analg* 2015;121:127-39.
9. Hillel AT, Pandian V, Mark LJ, Clark J, Miller CR, Haut ER, et al. A novel role for otolaryngologists in the multidisciplinary difficult airway response team. *Laryngoscope* 2015;125:640-4.