HHS Public Access

Author manuscript

Crit Care Med. Author manuscript; available in PMC 2018 March 01.

Published in final edited form as:

Crit Care Med. 2017 March ; 45(3): e326–e327. doi:10.1097/CCM.0000000000002216.

Reply

David R. Janz, MD, MSc¹, Matthew W. Semler, MD, MSc², and Todd W. Rice, MD, MSc²

¹Section of Pulmonary/Critical Care & Allergy/Immunology, Louisiana State University School of Medicine, New Orleans, LA

²Division of Allergy, Pulmonary, and Critical Care Medicine, Vanderbilt University School of Medicine, Nashville, TN

Keywords

intubation; respiratory failure

We appreciate the thoughtful letter to the editor by Xue et al (1) regarding our recent randomized trial of video laryngoscopy (VL) during endotracheal intubation of critically ill adults. This letter raises a number of important points that we will respond to here.

Xue et al highlight that when comparing laryngoscopy devices, accounting for the experience of the operator performing intubation with each laryngoscopy device is critical. In the FELLOW trial (2) we collected and adjusted for each operator's previous intubating experience overall and previous intubating experience with the specific laryngoscopy device at the time of each intubation. This dynamic variable (overall and device-specific experience evolving over the course of the trial) is unique to the FELLOW trial and provides a granular account of operator's device-specific experience than any previous trial of endotracheal intubation.

Xue et al also raise the relationship between operators' intubating experience and "proficiency". While intubating "proficiency" (defined variably) may occur after around 50 intubations in the operating room, the experience required to achieve "proficiency" during intubation of critically ill adults is unknown. Over the wide range of prior experience in our trial, we did not find that increasing device and procedure experience modified the effect of VL on first pass success. Most importantly for a trial comparing VL to direct laryngoscopy

Corresponding Author: David R. Janz, MD, MSc, 1901 Perdido St, Suite 3205, New Orleans, LA 70112, Phone: (504) 568-2904, Fax: (504) 568-4295, djanz@lsuhsc.edu.

Authors contributions: Drafting and revision of the manuscript: D.R.J., M.W.S., and T.W.R.

Conflicts of Interest: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. The authors declare no potential conflicts of interest. T.W.R. reported serving on an advisory board for Avisa Pharma, LLC, as a DSMB member for GlaxoSmithKline PLC, and as Director of Medical Affairs for Cumberland Pharmaceuticals, Inc.

Copyright form disclosure:

Dr. Janz received funding from Avisa Pharma and Cumberland Pharmaceuticals. He disclosed Dr. Rice is a DSMB member for GlaxoSmithKline PLC. Dr. Janz received support for article research from National Institutes of Health (NIH). Dr. Semler received support for article research from the NIH. His institution received funding from National Heart, Lung, and Blood Institute T32 award (HL087738 09). Dr. Rice received funding from Cumberland Pharmaceuticals (Director, Medical Affairs), Avisa Pharma (consultant). He received support for article research from the NIH.

(DL), there was no signal in favor of VL among those with more experience, with the point estimate for first-pass success actually favoring DL among those with > 50 prior intubations.

Xue et al raise the point of the current trial not mandating the shape of the intubating stylet. In the ICU where the trial occurred, usual care is a straight-to-cuff stylet shape; however since there are no definitive studies on how to shape a stylet we chose not to protocolize this technique.

Finally, Xue et al point out that the reason for failure to intubate on the first laryngoscopy attempt was not systematically collected in the FELLOW trial. We would refer the reader to recent data from another trial of VL (3) suggesting that failed first attempts with VL are most commonly due to poor camera image and inability to pass an endotracheal tube into the trachea.

We performed a pragmatic trial to test the effectiveness of VL in an ICU with a heterogeneous patient and operator population while not mandating any other procedural aspects so that we can learn how VL performs in real world rather than highly controlled scenarios. Our data only indirectly speak to how VL would perform if all operators were very experienced with each device, if certain neuromuscular blocking drugs were used, and the shape of stylets were protocolized. Fortunately, we have other recently published randomized trials of VL in critically ill adults showing that our result was not likely a result of our study design. The findings are the same across the board: routine use of VL during endotracheal intubation of critically ill adults improves laryngeal visualization but does not increase procedural success or decrease complications (3, 4, 5).

Acknowledgments

Source of Funding: Investigators were supported by a National Heart, Lung, and Blood Institute (NHLBI) T32 award (HL087738 09).

References

1. Xue FS, Yang GZ, Sun C. Comparing Video and Direct Laryngoscopy in Critically Ill Patients: Rational Study Design Is Important. *Crit Care Med*. 2017 in press.
2. Janz DR, Semler MW, Lentz RJ, et al. Randomized Trial of Video Laryngoscopy for Endotracheal Intubation of Critically Ill Adults. *Crit Care Med*. 2016; 44:1980–1987. [PubMed: 27355526]
3. Trimmel H, Kreutziger J, Fitzka R, et al. Use of the GlideScope Ranger Video Laryngoscope for Emergency Intubation in the Prehospital Setting: A Randomized Control Trial. *Crit Care Med*. 2016; 44:e470–476. [PubMed: 27002277]
4. Sulser S, Uebmann D, Schlaepfer M, et al. C-MAC videolaryngoscope compared with direct laryngoscopy for rapid sequence intubation in an emergency department: A randomised clinical trial. *Eur J Anaesthesiol*. 2016; 33:943–948. [PubMed: 27533711]
5. European Society of Intensive Care Medicine. McGrath Mac videolaryngoscope versus Macintosh laryngoscope for orotracheal intubation in intensive care patients: The randomised multicentre MACMAN trial [Internet]; presented at the European Society of Intensive Care Medicine Annual Congress; 2016 October 3; 2016. Available from: <http://www.esicm.org/news-article/presidents-session-clinical-trials-ENEWS-MON-OCT-3>