LETTER TO THE EDITOR



In Reply: Sedation choices and mortality: a well-defined tandem?

Kenshi Hayashida¹ · Masaji Nishimura² · Yuichi Imanaka³

Received: 27 November 2016 / Accepted: 7 December 2016 / Published online: 11 January 2017 © Japanese Society of Anesthesiologists 2017

Keywords Propofol · Benzodiazepines · Mechanical ventilation · Administrative data

To the Editor:

We wish to thank Dr. Jiang et al. for their thoughtful comments [1] on our recent work [2].

Several reasons may explain the difference in findings on mortality between our study and the meta-analysis by Fraser et al. [3]. One possibility is the fundamental difference in data source: while the meta-analysis involved pooled data from six papers, our study used a multi-center database. Next, the meta-analysis utilized Mantel–Haenszel risk ratios for short-term mortality, whereas our study employed a Cox proportional hazards analysis for in-hospital mortality. Moreover, the meta-analysis compared mortality between patients who had been administered benzodiazepines and nonbenzodiazepines, while our study

This reply refers to the article available at doi:10.1007/s00540-016-2224-z.

- Department of Medical Informatics and Management, University Hospital, University of Occupational and Environmental Health, 1-1, Iseigaoka, Yahatanishi-ku, Kitakyushu, Fukuoka 807-8556, Japan
- Department of Emergency and Critical Care Medicine, Tokushima University Graduate School, 3-18-15, Kuramoto-cho, Tokushima 770-8503, Japan
- Department of Healthcare Economics and Quality Management, Kyoto University Graduate School of Medicine, Yoshida Konoe-cho, Sakyo-ku, Kyoto 606-8501, Japan

focused on those who had been administered only benzodiazepines or propofol. Any or all of these factors may have contributed to the conflicting results.

We agree that sedation depth is a potentially important element in the relationship between sedative drugs and patient outcome, but were unable to incorporate this factor due to a lack of relevant information, such as Richmond Agitation-Sedation Scale. Nevertheless, it may be possible to collect additional information on drug usage for integration into current data. The inclusion of sedation depth is a worthwhile consideration for future studies.

Compliance with ethical standards

Conflict of interest None.

References

- 1. Jiang C, Esquinas AM, Mina B. Sedation choices and mortality: a well-defined tandem? J Anesth. 2016;30:918.
- Hayashida K, Umegaki T, Ikai H, Murakami G, Nishimura M, Imanaka Y. The relationship between sedative drug utilization and outcomes in critically ill patients undergoing mechanical ventilation. J Anesth. 2016;30:763–9.
- Fraser GL, Devlin JW, Worby CP, Alhazzani W, Barr J, Dasta JF, Kress JP, Davidson JE, Spencer FA. Benzodiazepine versus nonbenzodiazepine-based sedation for mechanically ventilated, critically ill adults: a systematic review and meta-analysis of randomized trials. Crit Care Med. 2013;41:S30–8.

