



Reply to: The use of drugs to prevent postoperative delirium in elderly patients with radical esophagectomy

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Letter to the editor

We would like to thank Dr. Li for his valuable comments [1].

First, in the ramelteon and suvorexant intervention group, both drugs were essentially started on the day before surgery, with no regular oral administration prior to the day before surgery. However, some patients were taking sleeping pills, mainly benzodiazepines, for sleep disorders. Because benzodiazepine usage is a risk factor for postoperative delirium, these patients were switched from benzodiazepines to both medications as soon as possible, rather than on the day before the elective esophagectomy. However, we were unable to evaluate the preoperative sleep quality due to the retrospective study design of the study. Future studies should evaluate the quality of sleep of the patients on the day before surgery after receiving both drugs.

Because this study enrolled patients undergoing elective surgery for malignant tumors, patients with significant cognitive disorders or dementia were not indicated for radical esophagectomy, and patients at a high risk of postoperative delirium were excluded [2]. Furthermore, no significant between-group differences with respect to preoperative nutritional management or preoperative nutritional status (such as body mass index or serum prealbumin level) was found. By including preoperative psychotropic medication use as a confounding factor in addition to other variables such as age and history of alcohol consumption, both groups were well-balanced with respect to baseline characteristics after propensity score matching.

Intraoperative anesthesia management and postoperative pain control were standardized during the observation

period. Sevoflurane-based anesthesia was used intraoperatively in both groups, and no cases of significant intraoperative hypotension due to massive bleeding or cardiovascular events were reported. Regarding postoperative pain control, no significant between-group differences regarding postoperative management with epidural anesthesia and intravenous acetaminophen administration was found, although detailed pain assessment data were unavailable.

Finally, the result of the Hosmer–Lemeshow test in the multivariate analysis was $p=0.301$, indicating a good fit of the model.

We hope that the above could be a good explanation for the concerns raised by Dr. Li. Because this was a retrospective study, some points raised by Dr. Li may indeed affect the validity of the results. Therefore, we are currently conducting a prospective study to assess the efficacy of ramelteon and suvorexant in preventing postoperative delirium.

Declarations

Conflicts of interest The authors declare no conflict of interest.

Ethical statement This study was conducted in accordance with the ethical principles of the Declaration of Helsinki.

Informed consent Informed consent or substitute for it was obtained from all patients for being included in the study.

References

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