

Effects of Propofol, Low and High Doses of Remimazolam on Hemodynamic and Inflammatory Response in Laparoscopic Surgery [Letter]

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Dear editor

We reviewed a recently published article by Deng et al¹ that investigated the effects of different doses of remimazolam and propofol on hemodynamics and inflammatory responses in patients undergoing laparoscopic surgery. The findings indicated that there were no differences in hemodynamic and inflammatory responses among the three groups. We thank the authors for their efforts in exploring the clinical applications of remimazolam. However, there are four points that we would like to discuss with the authors.

First, the flowchart provided in this study does not adhere to the current CONSORT guidelines, as it fails to illustrate the patient selection process. A detailed depiction of the patient selection process can enhance the reporting quality of randomized controlled trials and allow readers to gain a better understanding of how patients were selected.

Second, the authors mentioned that the sample size calculation was based on data from pre-experimental time points T1 and T2, but they did not specify the particular indicators used, such as blood pressure, heart rate, or any inflammatory markers. Clarifying this issue assists in demonstrating the reasoning behind the methodology to the readers.

Third, while the study explored the effects of different doses of remimazolam and propofol on the inflammatory responses of laparoscopic patients, the authors only provided the types of surgeries performed without comparing the extent of the surgical procedures. Larger surgical extents typically result in greater trauma and more pronounced inflammatory responses. Clarification of the impact of this factor would help support the current results.

Finally, the authors concluded that low doses of remimazolam could reduce the frequency and dosage of vasopressor use during surgery. In the clinical setting, however, this conclusion may apply to any sedative with cardiovascular depressant effects; lower doses usually result in milder cardiovascular suppression, thereby necessitating a reduced use of vasopressors. We suggest that in this study, the authors should emphasize that, compared to high doses of remimazolam, low doses maintain hemodynamic stability while still achieving the desired anesthetic effect.

Disclosure

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Reference

1. Deng W, Zeng Z, Liu Q, et al. Effects of propofol, low and high doses of remimazolam on hemodynamic and inflammatory response in laparoscopic surgery. *Drug Des Devel Ther*. 2024;18:3329–3336. doi:10.2147/DDDT.S459885

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