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LETTER

Clarifying Baseline Cognitive Eligibility and Cross-Scale Follow-Up in a Randomized Trial of Remimazolam Tosylate for Laparoscopic Surgery [Letter]

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Dear editor

Liu et al[1] deserve credit for studying young and middle-aged adults undergoing laparoscopic surgery, a group overlooked in perioperative neurocognitive research. Remimazolam was associated with less postoperative memory decline than propofol on postoperative day 1, 36.4% versus 53.2%, and day 3, 23.6% versus 37.8%, while the month-1 cognitive endpoint was similar, 6.4% versus 8.1%. However, there are two issues warrant discussion.

One concern is the mismatch between the eligibility criteria and the baseline table. The Methods exclude patients with preoperative MoCA <26. Yet Table 1 reports baseline Pre-MoCA scores of 26 (25–26) in Group R and 26 (24–27) in Group P. The interquartile range includes values below the exclusion threshold. The Methods also state that one point should be added for participants with ≤12 years of education. That matters. In 665 community residents from Western China, education had a larger effect on MoCA than age, effect size 0.272 versus 0.037, and MoCA-based cognitive impairment rates varied from 25.1% to 52.8% depending on the reference approach.[2] Ratcliffe et al[3] analyzed 18,410 participants and concluded that repeated MoCA interpretation should use demographic adjustment and reliable change methods, not a fixed threshold alone.The present report therefore needs an explicit statement on whether Table 1 shows raw MoCA values, education-adjusted values, or both. Otherwise, readers are left uncertain whether this is a reporting ambiguity or a protocol-execution issue.

Another concern is the 1-month conclusion, because the outcome scale changed. In-hospital cognition was assessed with MoCA, but month-1 follow-up used TICS-m by telephone. Table 2 then lists "postoperative cognitive decline" at 1 month as 7/110 versus 9/111. Without a preoperative TICS-m baseline, however, this cannot strictly be called decline from baseline. It is better understood as a one-time screening result. The manuscript also provides two different TICS-m interpretive rules: page 4 states that >31 is normal and <28 indicates severe impairment, whereas page 5 states that an education-adjusted TICS-m score ≤31 is the optimal cutoff for cognitive impairment. That leaves the 28–31 interval unresolved and creates internal inconsistency. Truong et al[4] reported good TICS-m reliability in 432 older adults, with a Person Separation Index of 0.86, but this supports careful within-instrument interpretation, not direct interchangeability with MoCA across time. A 2024 perioperative guidance likewise emphasizes baseline neurocognitive assessment when postoperative neurocognitive outcomes are inferred.[5]

Reporting both raw and adjusted baseline MoCA distributions, the number of patients below 26 before and after education correction, and a prespecified TICS-m classification scheme would materially strengthen this otherwise valuable study.

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No datasets were generated or analysed during the current study.

Author Contributions

Feng Zhou and Yuxia Jiao are co-first authors.

Yuxia Jiao and Yao Yu: Methodology, Formal analysis, Writing - Original Draft;

Feng Zhou and Zhihe Zeng: Conceptualization, Methodology, Supervision, Writing - Review & Editing. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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References

1. Liu J, Li M, Zhao K, et al. The effects of remimazolam tosylate on postoperative memory function in young and middle-aged patients undergoing laparoscopic surgery. *Drug Des Devel Ther*. 2026;20:580654. doi:10.2147/DDDT.S580654
2. Li H, Peng A, Lai W, et al. Impacts of education level on montreal cognitive assessment and saccades in community residents from Western China. *Clin Neurophysiol*. 2024;161:27–39. doi:10.1016/j.clinph.2024.02.017
3. Ratcliffe LN, Hale AC, McDonald T, et al. The montreal cognitive assessment: norms and reliable change indices for standard and MoCA-22 administrations. *Arch Clin Neuropsychol*. 2024;39(6):747–765. doi:10.1093/arclin/acae013
4. Truong QC, Choo C, Numbers K, et al. Enhancing precision of the Telephone Interview for Cognitive Status-Modified (TICS-M) using the Rasch model. *Psychol Assess*. 2023;35(7):559–571. doi:10.1037/pas0001233
5. Dilmen OK, Meco BC, Evered LA, Radtke FM. Postoperative neurocognitive disorders: a clinical guide. *J Clin Anesth*. 2024;92:111320. doi:10.1016/j.jclinane.2023.111320

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