



LETTER

## A Response to: Letter to the Editor Regarding “Comparison of Ultrasound-Guided Caudal Epidural Blocks and Spinal Anesthesia for Anorectal Surgery: A Randomized Controlled Trial”

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Received: September 7, 2022 / Accepted: November 8, 2022 / Published online: November 29, 2022  
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To the Editor:

Thank you for informing us about the letter discussing our recently published comparison of ultrasound-guided caudal epidural blocks and spinal anesthesia for anorectal surgery [1]. We would like to thank Professor Krishnagopal et al. for their kind comments about our research. Their suggestions will play an important role in our further research in the future.

In relation to their first comment, all patients in our study were anesthetized at the back waist and the patients could not see the specific operation process. What is more, surgeons, anesthesiologist, intensive care unit staff, nurses, and other investigators were not aware of the medication assignment in our trial. Therefore, we considered our study to be double blinded.

In relation to the second comment, we certainly agree that the incidence of accidental intravascular injections ranges between 3% and 14% in caudal epidural blocks [2] and apologize for not specifically introducing how to avoid intravascular injection in our article. In fact, the

indicator of successful epidural injection in our study was to visualize by ultrasound in real time the turbulence generated by the local anesthetic within the caudal space and Raghunathan et al. have also used this method [3]. Wiegele et al. found that ultrasonography is superior to the “swoosh” test as an objective confirmatory technique during caudal block placement [4].

The third comment is very professional. We certainly agree that the number of attempts should take into account since it was associated with patient satisfaction. Patients undergoing more than two attempts in our study were excluded from the study to avoid affecting the experimental results.

Fourth, we also agree that the fusion of sacrum in adults, previous spinal surgeries, and spinal deformities should be in the exclusion criteria as these conditions are not suitable for caudal epidural blocks and spinal anesthesia [5].

Finally, dexmedetomidine could have an impact on mean arterial pressure and patient satisfaction scores [6, 7]. Though we did not mention the total dose of dexmedetomidine used in each patient, there was no statistical difference in the total amount of dexmedetomidine used in our study.

We deeply thank Krishnagopal et al. again for their contribution to this discussion and would welcome any other criticism.

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## ACKNOWLEDGEMENTS

**Funding.** No funding or sponsorship was received for this letter or publication of this article. No Rapid Service Fee was received by the journal for the publication of this article.

**Authorship.** All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship, take responsibility for the integrity of the work as a whole, and have given their approval for this version to be published.

**Author Contributions.** All authors carefully read the letter by Hongyu Zhu et al. Shibiao Chen and Aiping Wei suggested comment points and drafted the manuscript. Yang Zhang revised the comment points and manuscript. All authors have read and approved the final manuscript.

**Disclosures.** Shibiao Chen, Aiping Wei, Jia Min, Lei Li, Yang Zhang have nothing to disclose.

**Compliance with Ethics Guidelines.** This article is based on previous research and does not include any research conducted by any author on human participants or animals.

**Data Availability.** Data sharing is not applicable to this article because no data sets were generated or analyzed during the current study.

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