



Letter to the Editor

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Perioperative analgesia research in pediatric open-heart surgery: the devil is in the details

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We read the recent original article by Abdelbaser et al. [1] outlining the efficacy of a bilateral thoracic retrolaminar block (TRLB) for perioperative analgesia in pediatric open-heart surgery with great interest. We would like to congratulate the authors on their novel study, which employed a meticulous randomized double-blinded approach that involved the administration of a local anesthetic block after anesthesia induction in the study group and saline in the control group, after which both underwent surgical interventions of a comparable duration of approximately 3 h [1]. Nonetheless, the index study findings must be interpreted cautiously in consideration of the following observations.

The authors found significant statistical differences between the TRLB (n = 29) and the control (n = 28) groups with regard to the first 24 h post-extubation fentanyl consumption and postoperative modified objective pain scores (MOPS), measured at 0, 2, 4, 8, 12, and 16 h post-extubation [1]. Importantly, the median (Q1, Q3) time (h) of extubation was significantly lower in the TRLB group (2 [1, 3]) than in the control group (6 [4.5, 6]) [1]. This significant difference in time-to-extubation complicates a sound comparison of the postoperative MOPS between the two groups. Since strictly referenced time periods after extubation were used [1], the MOPS evaluations were likely quite variable in relation to the actual time the single block injections were administered between the two groups. Using the quoted figures from the study by Abdelbaser et al. [1], a patient in the TRLB group was likely first assessed for MOPS-0 between 4 and 6 h after the block administration compared to a much later MOPS-0 evaluation between 7.5 and 9 h after the block for the control group.

Drawing on our research experience, we also acknowledge the practicalities of postoperative MOPS assessments [2]. Therefore, any perioperative analgesia study of inter-dependent objectives needs to closely account for inconsistencies resulting from the practicalities. In this context, it could have been more appropriate to evaluate the time to first postoperative rescue analgesia starting from admission to the intensive care unit rather than highlighting the inter-group differences in the time to rescue analgesia by measuring this parameter from extubation, as was the case in the study by Abdelbaser et al. [1]. Needless to say, these differences could result in the misinterpretation of the “true” analgesic potential of novel modalities, which is particularly relevant for studies with small sample sizes [3,4].

However, the study by Abdelbaser et al. demonstrated the role of TRLB in reducing the intraoperative fentanyl requirement, which is noteworthy and resonates well with the paradigm shift towards opioid-sparing cardiac anesthesia [1,5]. We were equally intrigued by the analgesic management of cardiopulmonary bypass in their study, as they

discussed the administration of prophylactic doses of fentanyl prior to skin incision and sternotomy and supplemental doses of fentanyl in the event of a $\geq 20\%$ increase in the mean arterial blood pressure and/or heart rate above baseline [1].

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Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

Author Contributions

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