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LETTER

The Minimal Clinically Important Differences as Well as Statistical Differences of Main Endpoints are Important in Comparing Postoperative Benefits of Different Analgesic Modalities [Letter]

Tian Tian, Xin-Tao Li, Fu-Shan Xue

Department of Anesthesiology, Beijing Friendship Hospital, Capital Medical University, Beijing, People's Republic of China

Correspondence: Fu-Shan Xue, Department of Anesthesiology, Beijing Friendship Hospital, Capital Medical University, No. 95 Yong-An Road, Xi-Cheng District, Beijing, 100050, People's Republic of China, Tel +86-13911177655, Fax +86-10-63138362, Email xuefushan@aliyun.com; fushanxue@outlook.com

Dear Editor

In a randomized controlled trial including 99 patients who underwent elective laparoscopic bariatric surgery, Sun and colleagues[1] showed that both intravenous infusion of lidocaine (IIL) and ultrasound-guided transverse abdominal plane block (UG-TAPB) provided good postoperative recovery and analgesia, but the IIL resulted in better analgesia at 12 h and 24 h postoperatively compared with UG-TAPB. This study has potential implications, but we would like to remind the readers to pay attention to the clinical significance of their findings.

First, the Quality of Recovery-40 (QoR-40) score at 24 h after surgery was used as the primary endpoint. In the available literature, a 10-point between-group difference in the total QoR-40 scores is generally considered as the minimal clinically important difference.[2] We noted that the total QoR-40 scores were significantly higher in the patients receiving IIL and UG-TAPB compared with the patients receiving the control intervention, but the net between-group difference in the median of total QoR-40 scores was less than 10. That is, the between-group difference in the quality of postoperative recovery is statistically significant, but its clinical significance is not clearly evident.

Second, this study assessed the visual analog scale (VAS) score of postoperative pain in the resting state, but not the VAS pain score in the active state. In fact, active pain is more severe than resting pain following bariatric surgery, and effective control of active pain after abdominal surgery is very important for the successful use of enhanced recovery after surgery protocols.[3] In this study, the VAS resting pain scores at some time-points after surgery were significantly different among the three groups, but the net between-group differences in mean VAS resting pain scores at all time-point s postoperatively were less than 1. We would like to remind the readers that the recommended minimal clinically important differences for postoperative pain scores in the available literature are 1.5 in the resting state and 1.8 in the active state when pain is assessed by a 0–10 VAS score.[4] That is, the improvements in postoperative pain control by IIL and UG-TAPB compared with the control intervention do also not exceed the recommended minimal clinically important differences.

Finally, intravenous dezocine was applied on demand to maintain a VAS score of 4 or less, and dezocine consumption within 24 h postoperatively was significantly decreased in the patients receiving IIL and UG-TAPB compared with the patients receiving the control intervention. However, when between-group differences in postoperative analgesic consumption are compared, it is generally required that the dosage of analgesic used for postoperative pain control should be converted into morphine milligram equivalents in oral or intravenous form.[3,4] Furthermore, it is commonly recommended that the minimal clinically important difference of morphine milligram equivalents for postoperative pain control is an absolute reduction of 10 mg intravenous morphine in the 24 h.[4] As the equianalgesic conversion factor of morphine and

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dezocine is 1,[5] the net between-group differences in mean dezocine consumption within 24 h postoperatively in this study are only equivalent to 0.9–5.91 mg intravenous morphine. Accordingly, the real clinical significance of postoperative opioid sparing with IIL or UG-TAPB in this study should be interpreted with caution.

We believe that clarification of the above issues will improve the interpretation of findings in this study.

Author Contributions

All authors contributed to data analysis, drafting or revising the article, have agreed on the journal to which the article will be submitted, gave final approval of the version to be published, and agree to be accountable for all aspects of the work.

Disclosure

All authors have received no financial support and have no potential conflicts of interest in this communication.

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