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LETTER

Comparing Clinical Efficacy of Non-Opioid and Opioid-Based Analgesia Protocols [Letter]

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Dear editor

In a single-center, randomized, non-inferiority trial including 80 patients who underwent robot-assisted radical prostatectomy, Lee et al[1] compared clinical efficacy of a non-opioid multimodal analgesia (NOMA) protocol with opioid-based patient-controlled analgesia (PCA). They showed that NOMA protocol was non-inferior to opioid-based PCA regarding postoperative pain control, with faster recovery of bowel function and less postoperative nausea and vomiting. With the development of enhanced recovery after surgery (ERAS) protocols, a shift toward non-opioid or opioid-sparing multimodal postoperative analgesia protocol has become popular.[2] In addition to the limitations described by the authors in the discussion section, however, we had several questions about methodology of this study and wished to get the authors' responses.

First, this study used a single-mode postoperative analgesia strategy in the PCA group, ie, PCA with morphine. In fact, the current ERAS protocols recommend multimodal postoperative analgesia strategies including a package of basic analgesics, such as paracetamol, NSAIDs or cyclooxygenase-2 specific inhibitors, gabapentinoids, dexamethasone, ketamine and others.[2,3] Other than nerve and fascial plane blocks, patients receiving the NOMA protocol in this study used the basic analgesics, including oral pregabalin 150 mg 2 h before anesthesia on the day of surgery, and 1.0 g intravenous paracetamol at the end of surgery and every 8 h for 48 h after surgery. As both acetaminophen and NSAIDs are the cornerstones of multimodal postoperative pain treatment in the ERAS practice,[3] we are concerned that not including a package of basic analgesics in the PCA group may have biased both postoperative opioid consumption and function recovery in favor of the NOMA group.

Second, rescue analgesia was allowed only when postoperative pain score assessed by the numeric rating scale (NRS) at resting was >5. We noted that median postoperative NRS scores at 2 h and 6 h postoperatively in the two groups were 3 to 5 (IQR of 2 to 9) at resting and 5 to 7 (IQR of 3 to 9) during movement. These results suggest that most of the patients in the two groups experienced moderate to severe pain in the early postoperative period. This is not in accordance with the goal of postoperative pain control required by the ERAS protocols, which recommend that analgesics should be universally titrated to achieve patient comfort with an NRS score of 3 or less.[4] That is, the studied NOMA protocol, including preoperative pregabalin, nerve and fascial plane blocks, and acetaminophen, shows an equivalent postoperative analgesic efficacy compared to opioid-based PCA, but it cannot adequately control early postoperative pain in patients undergoing robot-assisted radical prostatectomy. Thus, clinical value of this NOMA protocol is questionable.

Finally, the quality of recovery was evaluated using the quality of recovery 15 questionnaire (QoR-15), which is the sum of the scores of 15 items and has a maximal score of 150 for excellent wellbeing (100 for Part A and 50 for Part B). According to the results of Table 3 in Lee et al's article,[1] mean total QoR-15 scores before surgery in the two groups were only 92.1 to 92.8, with the standard deviations of 7 to 11.2. We would like to remind the authors and readers that the QoR-15 scores are commonly classified as excellent (QoR-15>135), good (122≤QoR-15≤135), moderate (90≤QoR-15≤121) or poor (QoR-15<90) wellbeing.[5] Thus, it was unclear why a significant proportion of patients included in this

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study only had moderate or poor wellbeing before surgery, though all study subjects were American Society of Anesthesiologists Physical Status classifications 1–2.

We believe that clarification of above issues is important for proper interpretation of their findings.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Lee JE, Oh J, Lee JN, Ri HS, Lee CS, Yeo J. Comparison of a non-opioid multimodal analgesia protocol with opioid-based patient-controlled analgesia for pain control following robot-assisted radical prostatectomy: a randomized, non-inferiority trial. *J Pain Res*. 2023;16:563–572. doi:10.2147/JPR.S397529
2. Ramirez MF, Kamdar BB, Cata JP. Optimizing perioperative use of opioids: a multimodal approach. *Curr Anesthesiol Rep*. 2020;10:404–415. doi:10.1007/s40140-020-00413-6
3. Cheung CK, Adeola JO, Beutler SS, Urman RD. Postoperative pain management in enhanced recovery pathways. *J Pain Res*. 2022;15:123–135. doi:10.2147/JPR.S231774
4. McEvoy MD, Raymond BL, Krige A. Opioid-sparing perioperative analgesia within enhanced recovery programs. *Anesthesiol Clin*. 2022;40:35–58. doi:10.1016/j.anclin.2021.11.00
5. Campfort M, Cayla C, Lasocki S, Rineau E, Léger M. Early quality of recovery according to QoR-15 score is associated with one-month postoperative complications after elective surgery. *J Clin Anesth*. 2022;78:110638. doi:10.1016/j.jclinane.2021.110638

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