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LETTER

Determining Opioid-Sparing Efficacy of Intraoperative Esketamine After Laparoscopic Gynecological Surgery [Letter]

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Dear editor

By performing a randomized controlled clinical trial in 120 participants who underwent laparoscopic gynecological surgery under general anesthesia, Huan et al[1] showed that intraoperative esketamine at both low and high doses significantly decreased postoperative opioid consumption without increased risk of adverse events. Their findings are very interesting, but we had several questions about the design, methods and results of this study and would appreciate the authors' answers.

First, as an important component of designing a randomized controlled trial, Huan et al[1] calculated the sample size of this study based on the findings of Ithnin et al's previous work. Because Huan et al did not provide this reference, we had no access to the data about surgical technique, study design, anesthesia management and perioperative analgesia regimen in Ithnin et al's work. Thus, it cannot be determined if 24-hour morphine milligram equivalents (MME) of 21.0 (SD, 11.4) mg in Ithnin et al's work is the suitable effect size for sample size calculation of Huan et al's study. Even if it is appropriate, using an expected reduction of 30% in sufentanil consumption with patient-controlled analgesia during 24 hours postoperatively only means a between-group difference of 6.3 mmE, which is less than the recommended effect size of 9 mg intravenous MME for 24-h opioid consumption in the randomized clinical trials.[2] Most important, Huan et al[1] did not clearly describe that the MME reported in this study were oral or intravenous morphine, though 1 mg intravenous morphine is equivalent to 3 mg oral morphine.[3] Thus, we argue that clarifying above issues is important for improving the transparency of research design and understanding clinical significance of opioid-sparing effects with intraoperative esketamine.

Second, 24-hour postoperative opioid consumption was significantly lower in both esketamine groups compared to the control group, but the mean opioid consumption within 48 hours postoperatively was still up to 77.2–85.9 mmE in both esketamine groups. Such high postoperative opioid consumptions cannot be accepted in the current context of enhanced recovery after surgery for gynecological surgery practices, which require that multimodal opioid-reduction analgesia strategies are used to avoid or minimize the use of opioids and their side effects.[4] Furthermore, simple opioid consumption is not a patient-centred outcome measure and cannot indicate any benefit to the patient, unless it is associated with the improved outcomes or the decreased adverse reactions.[5] This study showed that the incidences of postoperative opioid-related adverse effects and length of hospital stay were not significantly different between esketamine and control groups. More importantly, other than postoperative nausea and vomiting, and pain, this study did not determine other standardized endpoint of clinical trials assessing postoperative pain and patient comfort which are recommended by the perioperative medicine initiative, such as the quality of recovery, the time to gastrointestinal recovery, the time to mobilization and sleep quality.[5] In these cases, it is difficult for the readers to determine if decreased postoperative opioid consumptions with intraoperative esketamine can really be transformed into the clinical benefits of patients undergoing gynecological surgery.

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Disclosure

The authors report no conflicts of interest in this communication.

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