Dexmedetomidine and Lidocaine: Useful Adjuvants for Analgesia after Abdominal Surgery?

To the Editor:

We have read with great interest the article published in a recent issue of Pain Physician written by Martina Rekatsina et al (1). They performed a randomized placebo-controlled double blind study and reported that lidocaine significantly reduced postoperative opioid consumption, while dexmedetomidine prevented early postoperative nausea. We appreciate their inspiring work and respect their attention to the dexmedetomidine and lidocaine as adjuvant in postoperative analgesic and recovery. However, we still have some concerns on the strength of the conclusion based on the limited drug concentration of dexmedetomidine and lidocaine, unclear description of preoperative pain baseline of the research.

First, in the study, the authors used dexmedetomidine of 0.6 μg/kg/h and lidocaine of 1.5 mg/kg/h for infusion while they did not compare the effect of dexmedetomidine and lidocaine at different concentrations or dose on pain relief. However, there has been a lot of studies investigating the effect of dexmedetomidine and lidocaine on postoperative pain, while the infusion doses of dexmedetomidine and lidocaine varied widely (dexmedetomidine: 0.2-0.8 μg/kg/h, lidocaine: 1.3-3 mg/kg/h) (2-11). Notably, the outcomes in these studies were inconsistent, indicating that various concentrations of dexmedetomidine and lidocaine might lead to the different effects on the postoperative pain (2-11). Meanwhile, we analyzed these studies and divided them into subgroups by different experimental concentrations of dexmedetomidine and lidocaine. When the dexmedetomidine infusion concentration is less than 0.5 μg/kg/h, it could decrease the VAS score of the patients, which was inconsistent to the finding in the manuscript1 (Fig.1). Besides, the results showed that there was no significant difference between the lidocaine group and the placebo group in the whole and subgroups (divided by 1.5 mg/kg/h) (Fig.2). Therefore, different concentration of ex-

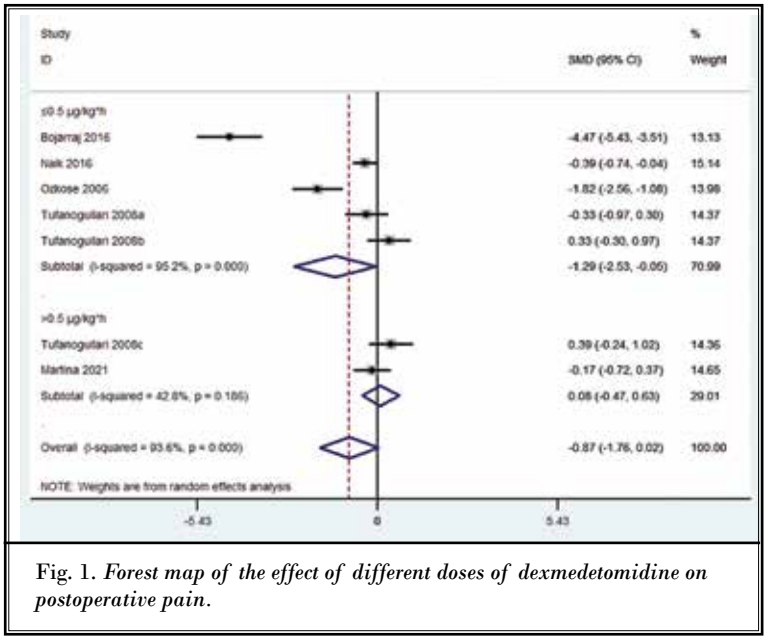

Fig. 1. *Forest map of the effect of different doses of dexmedetomidine on postoperative pain.*

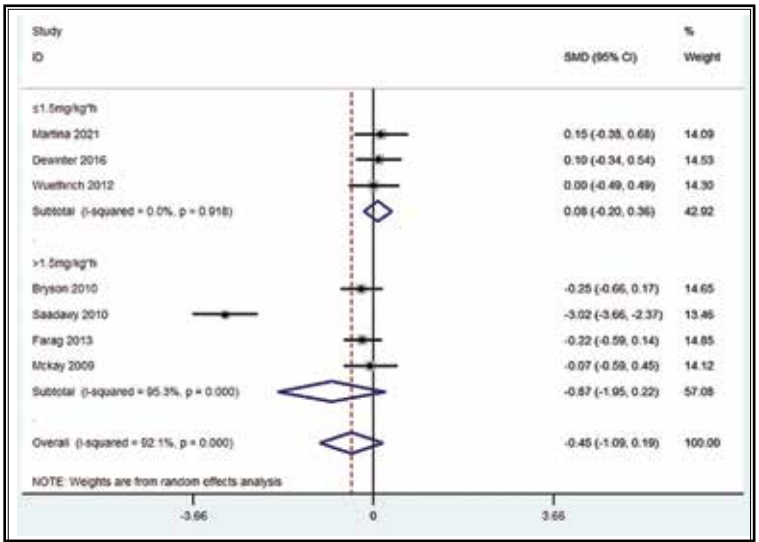

Fig. 2. *Forest map of the effect of different doses of lidocaine on postoperative pain.*

perimental dexmedetomidine and lidocaine should be considered for their different effects on the postoperative pain. We strongly suggested the authors perform further studies on the effects of different doses of dexmedetomidine and lidocaine on the postoperative pain.

Second, although the patients with known central nervous system or psychiatric disease were excluded, the authors failed to provide the baseline of pain and cognitive function of the cohort. It has been reported that patients with cognitively dysfunction had higher thresholds for pain sensitivity and reported fewer clinical pain, compared with the normal people (12). Besides, uterine fibroids themselves can cause pelvic pain and persistent pain could also change the patients' feelings of pain (13,14). Thus, it is important to test the pain and cognitive function of the cohort at baseline, or else it may increase the confounding bias of the result.

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