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LETTER

Effect of Adding Nalbuphine to Ropivacaine on Postoperative Analgesia of Erector Spinae Plane Block [Letter]

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Dear editor

The recent article by Zhang and colleagues[1] demonstrated that, compared with ropivacaine alone, addition of nalbuphine to ropivacaine for erector spinae plane block (ESPB) provided a prolonged duration of analgesia and a reduced opioid consumption after surgery. Their findings are very interesting, but we have several questions about the design, methods, and results on this study and would appreciate the authors' answers.

First, their postoperative analgesic regimen included intravenous flurbiprofen 50 before skin suturing and patient-controlled intravenous sufentanil analgesia with background infusion. Furthermore, mean cumulative sufentanil consumption in 24 h postoperatively was up to 74.38–81.32 μg in two groups, which is equivalent to 74.38–81.32 mg intravenous morphine. This is a typically opioid-dominated postoperative analgesic regimen and does not meet the recommendations of the current enhanced recovery after surgery (ERAS) practices for spinal surgery.[2] In fact, a key part of current ERAS protocols for spinal surgery is actually the multimodal opioid-sparing analgesic regimen containing different non-opioid analgesics, such as non-steroidal anti-inflammatory drugs, acetaminophen, ketamine and others.[3] Furthermore, it is required that these non-opioid analgesics are regularly administered perioperatively for patients without contraindications, while opioids should be used sparingly as rescue analgesics only.[4] It has been shown that scheduled administration of these non-opioid analgesics alone or their combination can very effectively decrease postoperative pain and opioid consumption after spinal surgery.[3,4] Thus, we argue that different results about influences of adding nalbuphine to ropivacaine on postoperative analgesia of ESPB would have been obtained if the perioperative analgesic regimen of this study had included regular use of paracetamol and any non-steroidal anti-inflammatory drug, as recommended by current ERAS protocols.[2–4]

Second, this study showed that addition of nalbuphine to ropivacaine significantly reduced pain scores at rest and during movement at some time-points postoperatively. We noted that the between-group differences of median pain scores at rest and during movement at these time-points was only 1 or less, which does not exceed the recommended clinically important difference of 2 points.[5] Especially, the median pain scores at rest and during movement at all time-points within 48 postoperatively were 3 or less in the two groups, indicating that most patients only have mild postoperative pain and achieve the clinically accepted analgesic target in the current ERAS practices.[3] In addition, patient satisfaction with postoperative pain management was not significantly different between groups. In these cases, we cannot determine whether improved postoperative pain control with addition of nalbuphine is clinically significant.

Finally, addition of nalbuphine to ropivacaine significantly decreased the mean cumulative sufentanil consumption in 24 h postoperatively, but the between-group difference was 6.94 μg sufentanil, which is equivalent to 6.94 mg intravenous morphine and is less than the recommended clinically important difference of 9 mg intravenous morphine

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in 24 h.[5] As 1 mg intravenous nalbuphine is equivalent to 1 mg intravenous morphine, addition of 10 mg intravenous nalbuphine to ropivacaine actually results in a larger perioperative opioid consumption than ropivacaine alone. Thus, we question the clinical significance of opioid-sparing with addition of nalbuphine to ropivacaine for ESPB.

Disclosure

All authors report no conflicts of interest in this communication.

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