Comments on "Comparison of Erector Spinae Plane Block at the Level of the Second Thoracic Vertebra With Suprascapular Nerve Block for Postoperative Analgesia in Arthroscopic Shoulder Surgery"

To the Editor:

In November 2022's issue of *Pain Physician*, Naglaa Fathy Abdelhaleem and Sherien E. Abdelatiff et al (1) concluded that suprascapular nerve block (SSNB) was not inferior to erector spinae plane block at the level of the second thoracic vertebra (high thoracic-ESPB) in the context of phrenic nerve sparing pain control for the arthroscopic surgeries, which demonstrated these two methods of nerve block as a part of multimodal analgesia for relief of postoperative pain in shoulder surgery. However, there also existed some issues worthy of attention.

First, in terms of trial design, this study was a randomized controlled trial, in which all subjects were randomly assigned in a 1:1:1 ratio to be allocated either in the high thoracic-ESPB, SSNB, or control group (received general anesthesia only). However, as the part of background introduced, interscalene brachial plexus block (ISB) was recognized as the gold standard for shoulder surgeries, and recent studies had found that high thoracic-ESPB and SSNB could be alternatives to avoid ISB-associated side effects (1). In this way, an IBS group could be set up in the future in order to further confirm that these three methods of nerve block provide comparable effect of postoperative analgesia.

Second, according to the supposed hypothesis, it could be inferred that this study was a noninferiority test and the primary outcome was the analgesic efficacy for arthroscopic surgeries. However, when comes to the calculation of the sample size, the specific effect model was not described. At the same time, the sample size was calculated based on the total morphine dose, which was not regarded as the primary outcome measure. As a result, it might be difficult to ensure adequate power for the primary outcome analysis (2,3).

Finally, in the part of Methods, patients were given acetaminophen pre- and post-operatively. However, acetaminophen overdose has become one of the most common causes of acute liver failure and intentional or accidental death in many counties (4). The United States Food and Drug Administration (FDA) recommended dose of acetaminophen for adults is not exceed 4 g every 24 hours (4). Consequently, it was necessary to describe the medication duration of acetaminophen. Moreover, the patients also received the diclofenac sodium after the surgery. It was acknowledged that diclofenac sodium and acetaminophen have the similar mechanism of action by way of cyclooxygenase (COX) inhibition (5,6). So it was very important to state the reason and time of medication, which might have impact on the effect of analgesia.

Anyway, this was the first study to compare these 2 analgesic block techniques for arthroscopic shoulder surgeries, which directed the clinical practice in some way.

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