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LETTER

Determining Effect of Postoperative Transcutaneous Electrical Acupoint Stimulation on Recovery Quality After Gynecological Laparoscopic Surgery [Letter]

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Dear editor

By performing a randomized controlled trial in a total of 97 female participants who underwent elective gynecological laparoscopic surgery under general anesthesia, Zhou et al[1] demonstrated that a 30-min transcutaneous electrical acupoint stimulation (TEAS) in the immediate post-anesthesia recovery period produced an improved quality of postoperative recovery assessed by the 15-item quality of recovery questionnaire (QoR-15). However, as a randomized controlled trial, we noticed several issues about the methods and results of this study that need further discussion and clarifications.

First, the main aim of this study was to evaluate the effect of postoperative TEAS intervention on the recovery quality after gynecological surgery. Zhou et al[1] did not state if the two groups were comparable with respect to preoperative comorbidities, nutritional status, hemoglobin and serum protein levels, psychological and sleep disorders, though they are routine screening parameters. Available literatures indicate that preoperative comorbidities including diabetes and lung disease, frailty, malnutrition, hypoalbuminemia, anemia, sleep disorders, depression and anxiety are significantly associated with increased risks of complications and delayed recovery after gynecological laparoscopic surgery.[2,3] We are concerned that any significant between-group difference in these unknown preoperative factors would have biased the main findings of this study.

Second, postoperative analgesia scheme only included intravenous tramadol as needed. This is not in agreement with the opioid-sparing multimodal analgesia scheme recommended by the current enhanced recovery after gynecologic surgery practice, which emphasizes a combined use of analgesics with different mechanisms, especially scheduled administration of non-opioid analgesics, such as acetaminophen, non-steroidal anti-inflammatory drugs, ketamine, dexamethasone and others. Given that opioid-associated adverse events can worsen patient experience and delay postoperative functional recovery, minimizing or avoiding opioid use by the opioid-sparing multimodal analgesia pathway has been recommended to improve patient experience and enhance functional recovery after surgery.[3] Thus, we argue that the different results about the quality of postoperative recovery would have obtained if an opioid-sparing multimodal analgesia scheme had been included in this study design.

Finally, the QoR-15 score measured 24 h postoperatively was significantly improved with postoperative TEAS, but the net between-group difference of mean global QoR-15 scores 24 h postoperatively only was 4.38 points, which is less than the recommended minimal clinically important difference, that is, a 6-point difference.[4] Furthermore, as the QoR-15 score measured 24 h postoperatively cannot provide a true evaluation of postoperative recovery quality, it is often required that a repeated measurement of QoR-15 score 48 h postoperatively should be conducted to enable an adequate evaluation of postoperative recovery quality.[5] In this study, however, mean global QoR-15 scores 48 h postoperatively were not statistically significant between groups. Similarly, the time to first flatus was significantly reduced with postoperative TEAS, but its net between-group difference was 1.78 h, which does also not exceed the recommended

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minimal clinically important difference, that is, a 6-h difference.[6] Thus, we question the real clinical significance of improved postoperative function recovery with postoperative TEAS in patients undergoing gynecological laparoscopic surgery. We completely agree with the authors' opinion that future large-scale clinical trials with rigorous design are still needed to validate the results of this study.

Disclosure

The authors report no conflicts of interest in this communication.

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