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RESPONSE TO LETTER

Comparing Efficacy of Different Analgesic Modalities in Patients Undergoing Total Knee Arthroplasty [Response To Letter]

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Dear editor

In the letter to editor named "comparing efficacy of different analgesic modalities in patients undergoing total knee arthroplasty", Gao et al noted some issues to discuss and offer some recommendations for our study. Thank you for their suggestions, they are conducive for further improving scientific research, and we'd be happy to answer their queries.

First, in our study, there were ten patients in each group in the preliminary study, and the results of pre-experiment were not included in the final analysis. Previous studies showed that reductions in pain scores of around 30–40% are needed to reflect clinically useful improvements in pain,[1] and a 30% difference in pain scores on the Visual Analog Scale score was selected to calculate sample size.[2] Although the non-inferiority margin of our study is set based on the results of the pre-experiment, the results of the pre-experiment were only used to calculate the sample size. Next, we used the results of a previous similar study[3] for sample size estimation. When the 0.5 times standard deviation of the pain score at postoperative 24 hours during motion in the control group was selected as the non-inferiority margin, the estimated sample size was 42 patients in each group. The total sample size in our study was 87 patients, which meets the requirements of the study. Thus, the sample size in our study is adequate to achieve an effective inferiority test.

Second, it is certain that it is more appropriate to convert all postoperative analgesics used to equivalent opioid consumption. But we can not find an equivalent morphine dose in other previous studies. So, the dosages of different rescue analgesics were expressed separately as performed in other studies,[4–6] which did not perform equal analgesia conversion of all analgesics.

Finally, the quality of early postoperative recovery and patients' satisfaction with postoperative analgesia may be helpful for the evaluation of postoperative pain control effect, and it does help to improve the quality of research. But they are not necessary for the assessment of postoperative pain, as shown in previous studies.[5,6]

Disclosure

The authors report no conflicts of interest in this communication.

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