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Invited Commentary

Reply letter to: "Commentary on: Ketamine reduces pain and opioid consumption after total knee arthroplasty: A meta-analysis of randomized controlled studies"

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Dear Editor,

Thank you for the comments on our manuscript entitled "Ketamine reduces pain and opioid consumption after total knee arthroplasty: a meta-analysis of randomized controlled studies" which was published in the International Journal of Surgery [1].

Total knee arthroplasty (TKA) is a surgical procedure to treat end-stage osteoarthritis (OA) and rheumatoid arthritis (RA). Approximately 300 thousand TKAs are operated annually in the U.S and the incidence is on the rise with aging [2]. TKA has been a serious social problem as it is related with postoperative pain which can range from moderate to severe pain, may delay functional recovery, and increase the risk of thrombotic complications such as deep venous thrombosis (DVT) and pulmonary embolism (PE).

We performed a systematic review and meta-analysis on randomized controlled trials (RCTs) to evaluate the efficacy and safety of ketamine in reducing pain after total knee arthroplasty (TKA). We found that ketamine was effective in reducing pain and cumulative morphine consumption during the early post-operative period after total knee arthroplasty. In addition, the use of ketamine was associated with a lower incidence of adverse effects. Due to the limited number of included studies, we did not perform a subgroup analysis. More RCTs are required in the future. For a low level of heterogeneity, a fixed-effects model should be more reasonable to use. The types of opioid used in the included RCTs were different, thus, each characteristic was calculated using the weighted mean difference. The PubMed, OVID, and ScienceDirect databases were searched, and we think the search process is logical. Opioid consumption was deeply discussed in our paper. The follow up period ranged from 16 to 40 months. This should be discussed as a limitation in the Discussion Section. We agree that the optimal dose of ketamine should be explored by enrolling more RCTs. Thank you.

Provenance and peer review

Invited Commentary, internally reviewed.

Ethical approval

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Declaration of competing interest

None.

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