



Letter to the Editor

Letter to the Editor on the article “Comparison of adductor canal block with local infiltration analgesia in primary total knee arthroplasty: A meta-analysis of randomized controlled trials”(Int J Surg 2019;69:89–97)


Dear Editor,

We took great interest to read the article by Zhao et al. [1] entitled “Comparison of adductor canal block with local infiltration analgesia in primary total knee arthroplasty: A meta-analysis of randomized controlled trials” published online September 2019 in the International Journal of Surgery. They performed a systematic review and meta-analysis aiming at utilizing the current best evidence to determine whether adductor canal block (ACB) or local infiltration analgesia (LIA) is a better modality to manage short-term postoperative pain and opioid consumption following primary total knee arthroplasty (TKA). It is a very interesting study. However, this review brought several questions to our minds that we would like to communicate with the authors.

This meta-analysis included 8 randomized controlled trials to compare ACB and LIA after TKA. However, in an included study conducted by Gurava Reddy et al. [2], the authors stated in the Methods section: “A prospective study was conducted between July 2016 and December 2016 in our institute on a total of 200 patients who underwent unilateral TKA,” and in the Discussion section they stated “We accept that lack of randomization would have introduced an element of bias in our study even though both the groups are comparable regarding patient profile and number.” Therefore, the study by Gurava Reddy et al. is not a RCT and should be excluded. We suspect that if this article is excluded, the conclusions drawn may differ from the original results.

With the large heterogeneities found in this meta-analysis (pain scores with rest at 24 h, $I^2 = 73\%$; pain scores with movement at 24 h, $I^2 = 67\%$; pain scores with movement at 48 h, $I^2 = 66\%$; total opioid consumption at 24 h, $I^2 = 86\%$; total opioid consumption at 48 h, $I^2 = 86\%$; length of stay, $I^2 = 86\%$; TUG test at 24 h, $I^2 = 75\%$), a sensitivity analysis was conducted to find out the sources of heterogeneities. However, we do not think this analysis has achieved the purpose. Pooling data of these studies with such high heterogeneities compromise power of the results. Therefore, we suggest that the authors should mention the possible sources of heterogeneities by using adequate subgroup analyses. The possible sources of heterogeneities include racial differences, age differences, mode of anesthesia, and time for block and drugs.

We appreciate that Zhao et al. provided us with an interesting meta-analysis. However, more studies based on scientifically designed RCTs with long-term follow-up and large samples should be carried out to clarify these issues.

Ethical approval

Not Applicable.

Sources of funding

None.

Author contribution

The author read and approved the final version of the letter to the Editor.

Trial registry number

Not applicable.

Guarantor

Huan Min.

Data statement

Not Applicable.

Provenance and peer review

Not Commissioned, internally reviewed.

Declaration of competing interest

None.

References

- [1] Y.W. Zhao, Z.H. Huang, W.M. Ma, Comparison of adductor canal block with local infiltration analgesia in primary total knee arthroplasty: a meta-analysis of randomized controlled trials, *Int. J. Surg.* 69 (2019) 89–97.
- [2] A.V. Gurava Reddy, M. Shafeekh, S.R. Sankineani, K. Jhakotia, M. Sagi, D. Daultani, et al., Comparison between multisite infiltration analgesia versus adductor canal block for pain management in total knee arthroplasty: a prospective study, *Anesth. Essays Res.* 12 (2018) 774–777.

Huan Min

Department of Orthopedics, Jiangxi Provincial People's Hospital Affiliated to Nanchang University, 92 Aiguo Road, Nanchang, 330006, Jiangxi, China
E-mail address: doctorliyuxu@163.com.