Reviewer's report

Title: Efficacy and safety of prophylactic use of ketamine for prevention of postanesthetic shivering: A systematic review and meta analysis

Version: 0 Date: 18 Jul 2019

Reviewer: Kane Pryor

Reviewer's report:

In this submission the authors have undertaken a meta-analysis of the use of ketamine to prevent postoperative shivering. The performance of a meta-analysis in this domain is welcome, although not entirely novel --- a meta-analysis of multiple antishivering agents (including ketamine) was presented in Minerva Anestesiologica in 1/2019 [PMID 30226340]. Further, the RCTs evaluating ketamine and shivering have been consistent in demonstrating a beneficial effect of ketamine over placebo, and so it is no surprise to see an odds ratio of 0.13 for the primary outcome. However, the author's adverse effect secondary outcomes do confer more novelty.

The authors have appropriately followed PRISMA and GRADE best practices, and the presentation is consistent with the conventions of this journal. I do not believe that the manuscript is ready for publication in its present form, but I do expect that the authors will be able to address the issues.

Please address the concerns below:

MAJOR ISSUE

The major issue with this manuscript is the written English. While there are sections of it that are fine, the longer narrative sections contain a significant number of grammatical errors and inappropriate word selection. In places, this word selection changes the meaning, or makes it difficult to assess the author's intended meaning. The most problematic section is the Discussion. The authors are strongly suggested to have a native English speaker review and edit the manuscript.

In the line items listed below, I have included some of the grammatical and word choice errors, but this should not be taken to be complete, and even after correction the manuscript would benefit from a comprehensive edit.
MINOR ISSUES/LINE ITEMS

(1) P2LM27. The study is first identified as a meta-analysis in the abstract results. This should occur in the methods.

(2) P2LM36-54. You might consider including some more quantitative results (ORs and CIs) in the presentation of the main secondary outcomes in the abstract.

(3) P4LM17. The statement that postoperative shivering increases mortality is not evidence based. In fact, the abstract of the citation specifically states the following: "No link has been demonstrated between the occurrence of shivering and an increase in cardiac morbidity, …"

(4) P4LM44. Please provide a citation for the statement "it may prevent postanesthetic shivering by decreasing core-to-peripheral heat distribution."

(5) P7LM5 and elsewhere. The authors are inconsistent in their use of "pethidine" or "meperidine". I see both used in this journal, but the use needs to be consistent.

(6) P7LM32-56. This paragraph should include information on the ketamine doses used in the studies.

(7) P8LM44. The P-value for the Begg's test is 0.055, which does not cross the significance threshold, but is close; however, given that the prior probability of bias is appreciable, I think the statement "there was no publication bias" should be softened a little.

(8) P8LM60. The authors seem to have repeated the Begg's test result here and P8LM44.

(9) P9LM38. Please provide quantitative data for the ENT results.

(10) P9LM58. It is not clear why the authors are presenting data here as risk ratios (RR) when other contrasts are made as OR, and the Methods discussed only OR.

(11) P11LM5. Incorrect word choice. Shivering is not an "emotion".

(12) P11LM44. The use of the word "idealize" is incorrect.

(13) P12LM9. The use of the word "advance" is the incorrect word choice.

(14) P12LM21. The use of the clause "quick responsive rate than ketamine" does not make sense.

(15) P13LM19-40. This paragraph is off-topic and does not relate to the results of the work performed.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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