Author’s response to reviews

Title: Effect of Dexmedetomidine on Duration of Mechanical Ventilation in Septic Patients: A Systematic Review and Meta-Analysis

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Author’s response to reviews:

Dear Dr. Melidoni,

We appreciate your efforts and patience on our manuscript (PULM-D-19-00305, Effect of Dexmedetomidine on Duration of Mechanical Ventilation in Septic Patients: A Systematic Review and Meta-Analysis). We reviewed points raised by reviewers deliberately, revised the manuscript point-by-point and highlighted in the manuscript. We hope the revised manuscript would be more acceptable in BMC Pulmonary Medicine.

In addition, we met a technical problem when we submitted the revision. Two articles in our reference list cannot be correctly identified by the system. One is written in Chinese (DOI 10.3760/cma.j.issn.0376-2491.2016.22.010) and the other is a chapter from a published book (PMID: 24741728). We would appreciate if you could give us some help.

We addressed all the points as following:
Cassiano Teixeira (Reviewer 1): Dear authors,

Thanks for the opportunity to read the paper: Effect of Dexmedetomidine on Duration of Mechanical Ventilation in Septic Patients: A Systematic Review and Meta-Analysis. However, it is necessary some adjustments previous to publication of this manuscript. The big problem is related to finding of only 4 papers.
Re: We appreciate your effort to review our manuscript. We screened all databases we addressed in the manuscript, but only 4 trials meet the included criteria. In other words, it’s a new topic as we reviewed
and it warranted further solid randomized control trials on the topic.
1. Abstract: In the methods sections, the informations are not clear.
Re: Thanks for your constructive advice, we have overwritten the section of methods which may be more comprehensive.
2. Introduction: This section must be related to the goal of the study. the more important informations and doubts are not presented in this section.
Re: Thanks for your suggestion. We had revised and added any essential information for the section of introduction which may be more integrated.
3. Methods: It is OK.
4. Results: It is OK.
5. Discussion: The discussion is so superficial, and the authors must be compare their findings with previous studies and opinate about their findings. Better description of limitations of the study are important.
Re: We appreciate your significance suggestion. We had overwritten the discussion section and referred several previous studies. Furthermore, we had revised the section of limitation description. The revised section of discussion would be much scientific.

Carmen Barbas (Reviewer 2): Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.
Please overwrite this text when adding your comments to the authors.

General comments: it is a systematic review and meta-analysis that analyzed the effects of dexmedetomidine with different comparators (4 randomized controlled trials) on duration of mechanical ventilation, 28 days ventilator free days and 28 day mortality in septic ICU patients receiving mechanical ventilation. Four studies with a total of 349 patients were included. The trials conducted in these studies indicated that DEX was NOT associated with significantly different durations of mechanical ventilation (MD 0.65, 95% CI, -0.13 to 1.42, P = 0.10). However, there were significant differences in ventilator-free days (MD 3.57, 95% CI, 0.26 to 6.89, P =0.03) and 28-day mortality (RR 0.61, 95% CI, 0.49 to 0.94, P = 0.02) in the septic patients.

Specific comments:
1. The authors must change in the abstract that the trials conducted in these studies that DEX was NOT associated instead of was associated.......The authors must say in the abstract that only 3 trials had the primary outcome of the metaanalysis and only 2 trials analyzed ventilator free days ......please correct...
Re: Thank you for your constructive advice. Per your request, we had revised the expression of our study at the section of abstract and added the key information of included trials. From that, the abstract would be more intact.
2. This metaanalysis is much more a hypothesis generation for future randomized controlled trials in septic patients because the comparators are different, the dose of DEX were different and not all trials reported all the studied outcomes.
Re: The comparators of using DEX affected mechanical ventilation in septic patients were complicated. As reported studies demonstrated, the results were controversial. It warranted solid randomized controlled trials about the subject.

We appreciate editors and reviewers on the manuscript. We declare no conflict of any interests get consent from all authors to publish.
Best regards,
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