Reviewer’s report

Title: The Optimal Dose of Succinylcholine for Rapid Sequence Induction: A Systematic Review and Meta-analysis of Randomized Trials

Version: 0 Date: 02 Jan 2020

Reviewer: David Wong

Reviewer's report:

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.

Thank you for asking me to review this well written SRMA on optimal dose of succinylcholine administered in a rapid sequence induction manner.

6 RCTs with 864 patients were examined and the primary outcome was excellent intubating conditions.

Abstract:

P2, L13. The term absolute risk difference seems a bit odd as the most common term used is absolute risk reduction (ARR). However, in view the outcomes of excellent intubating condition and unacceptable intubating condition are opposite aspects of intubation, using ARR for both conditions may be misleading/inappropriate. Therefore, I accepted this terminology.

P2, L26, ARD -14 to -67%

P2, L30, ARD +12 to +28%

P2, L31, suggest move excellent intubating condition increased to immediately following L26; so resultings pertaining to excellent intubating conditions are together

P2, line 35, group together doses 0.5, 0.6, 0.8, 1.5, 2.0 unacceptable condition- no diff.

P2, line 47. 1.5 did not produce excellent condition, only 2.0 did.

Unacceptable is more commonly used than inacceptable
Intubating condition than intubation condition

P6, line 18. Suggest put a parallel explanation of NNT. NNT positive is obvious, number need to produce an increased likelihood of an outcome. NNT in negative number is harder for readers to understand. It may be interpreted as the number after the negative sign is the number needed to treat in order to produce the opposite effect of the described outcome. Eg NNT of -1.3 means 1.3 patients treated with experimental regime will produce more likelihood of non-excellent condition. I suggest you provide an explanation of Negative NNT here and at the caption of each figure.

P6, line 50. 26 excluded but explanation of only 6 studies were given.

P7, 8. For each outcomes and at each dosing, do you have assessment of heterogeneity, I-square of studies?

P8, line 10, shift the negative sign to next line to show -14. As is, appear as +14

P8, line 20, suggest only state 2.0 as 1.5 is not stats significant

P8, line 39-47 0.5….2.0 same conclusion can combine into one sentence

P9, line 7, numbers reversed

P9, line 38. Only true at 2.0 dose

P10, line 24. There is actually large variations of the risk of unacceptable condition. Here the baseline % is low 1.08%; but the numbers vary from 0% to 3.3%. The absolute risk diff is small but relative risk diff is huge (infinity). In contrast for excellent conditions, the baseline is 87% and the variation is from 63-98%. The relative risk difference is only 50%.

P11, line 22. Very true, we are interested in dose response primarily in emergency intubation and RSI. But the date presented is in nonemergency situation without obese or difficult airway patients. Do we have any idea the volume of studies available for this more meaningful context?

P12, line 13, ditto 1.5mg

Figures 2, 3, 4. Add explanation of a positive and negative ARD/NNT

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:

Acceptable

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

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal