Reviewer’s report

Title: Postoperative Tight Glycemic Control Reduces Postoperative Infection In Patients Undergoing Surgery: A Meta-Analysis

Version: 0 Date: 28 Dec 2017

Reviewer: Ilaria Cavallari

Reviewer's report:

Wang et al. performed a meta-analysis including RCTs that compared outcomes in patients randomized to post-operative tight vs conventional glycemic control. In brief, 13 studies for a total of 3423 patients were included and no significant differences in terms of short-term mortality, infections, neurological disorders, acute renal complication were found between the two strategies. Results of this study are in the same line of evidence of previous meta-analyses on the same topic performed in critically ill patients in ICU and of another meta-analysis in the peri-operative setting including also retrospective studies.

Major comments:

- change the title;
- the primary outcome of the current meta-analysis was short-term mortality. All available studies published so far showed a neutral effect of the two different glycemic control strategies on mortality; of note, short-term mortality is an endpoint at low incidence. Does this meta-analysis have enough power to assess any difference in terms of mortality? Please, in the background clarify which novel information could add the present meta-analysis to the current knowledge deriving from RCTs and prior meta-analyses;
- the results section should include more details on the included studies (i.e. how many patients had diabetes?; type of surgery (cardiac or not); difference cutoffs used to define tight vs. conventional glycemic control and different strategies to achieve the goals; timing of intervention). In addition, overall event rates (%) and not only RR should be reported in the figures and in the text;
- Table 1 is rather unclear; please re-organize the table with the following information: first author of the study; N of patients; N of patients with diabetes; target glucose levels in the 2 arms; cardiac surgery; median FUP; primary endpoint; Jadad score;
- a p value of 0.07 regarding differences in terms of post-operative hypoglycemia can not support the statement of a neutral effect, please revise; in addition, the subgroup analysis and meta-regression paragraph should be revise to improve readability.

Minor comments:
- improve english language in the text and check for spelling mistakes;
- supplemental figures 4-5-6-7-9-10 could be omitted (data are already included in the text and in table 2);
- include a paragraph explaining the strenghts of this study before the limitations.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
No

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?
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