Reviewer’s report

Title: Anemia and perioperative mortality in Non-cardiac Surgery patients: a secondary analysis based on a single-center retrospective study

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Reviewer: Fernando J. Abelha

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Preoperative anemia and postoperative thirty-day mortality in patients undergoing noncardiac surgery: a secondary analysis based on a single-center retrospective study.

In this manuscript, the authors sought to "investigate the relationship between them in patients undergoing non-cardiac surgery of different ages"

For that the authors conducted a retrospective analysis of the electronic medical records of patients who underwent general surgery.

They concluded that: "In patients undergoing non-cardiac surgery, anemia is an independent risk factor for perioperative 30 day mortality, especially among emergency surgery, high-risk surgery and surgery with intraoperative blood transfusion".

The proposed subject may be relevant and important, and the information provided and the study narrative is clear and the produced manuscript is according to the standards of reporting.

The manuscript provides adequate and actual information on a essential subject.

I only have minor issues or suggestions to make.

Minor issues:

a) Introduction is a little bit confusing and although we agree that there are conflicting data there is no place to state that "Little is known about the effects of anemia in the postoperative 30 day mortality in patients undergoing non-cardiac surgery." Because some of the cited references are really for non-cardiac surgery.

b) The study is about adult patients so the reference at the introduction made of studies involving children and the elderly is not adequate.

c) The described aim of the study at the end of introduction section is different of that displayed at the abstract: "Our study aims to explore the relationship between anemia and
perioperative mortality in patients, at all ages, undergoing non-cardiac surgery, and to identify potential influencing factors." At all ages? Is it really true? The Combined Assessment of Risk Encountered in Surgery (CARES) study was made on adult patients.

d) At discussion section the authors state that they "found that anemia is an independent risk factor for perioperative 30day mortality(compared with none anemia, mild anemia". Results should not be repeated here and the values for p are exceeding and should not be re-reported.

e) In discussion section the text follows the same rational observed on introduction that there is lack of studies on non-cardiac surgery although for instance hepatectomy studies are refered…(and they are non-cardiac surgery patients).

f) This study is not about strategies to treat anemia so sentences like: "it is important to actively manage anemia in daily life" are not according to the study and are not a direct conclusion of the results.

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

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