Reviewer’s report

Title: Doxapram alleviates low S p O2 induced by the combination of propofol and fentanyl during painless gastrointestinal endoscopy

Version: 0 Date: 22 Apr 2019

Reviewer: Alessandro Belletti

Reviewer's report:

Dr. Xin and colleagues present in this manuscript results of randomized placebo-controlled trial evaluating the effect of doxapram in reducing the incidence of respiratory depression during gastrointestinal endoscopy under sedation with propofol. They found that patients randomized to doxapram group had a lower incidence of respiratory depression (defined as need for supplemental oxygen) and need for airway rescue maneuvers, without affecting depth of sedation or quality of examination.

I believe this is an interesting study, given the worldwide volume of minor procedures under deep sedation outside the safe environment of an operating theatre, frequently without assistance from a trained anesthesiologist.

My major comment on this manuscript is lacking of an end-tidal CO2 monitoring. This is now considered part of standard anesthesia monitoring by many professional societies. Did the Authors measured also etCO2 in their patients?

Additional comments:

1. Please provide a description of inclusion criteria as well, in addition to exclusion criteria.

2. As a related point, please move details on enrolled patients (age range and ASA class) to the Results section, as well as the total number of patients randomized. As a general rule, please leave only general description of the methods in the Methods section, and leave description of enrolled patients characteristics in the Results section.

3. I appreciate details on sample size calculation; yet they are quite unclear. Please provide a clear description of expected incidence of respiratory depression in the control group, as well as the expected reduction in the doxapram group.

4. Please report full p-values rather than p<0.05 in both abstract and main text.

5. Please add a very short description (1, max 2 sentences) of doxapram mechanism of action also in the Introduction.

6. Which are doxapram side effects?? please describe the most relevant and the most severe side effects and report their incidence.
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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