Reviewer’s report

Title: The Effects Of Desflurane And Sevoflurane On Nesfatin1 Levels In Laparoscopic Cholecystectomy

Version: 1 Date: 04 Sep 2017

Reviewer: Gaetano Scaramuzzo

Reviewer’s report:

The manuscript "The effects of Desflurane and Sevoflurane on Nesfatin-1 levels in Laparoscopic Cholecystectomy" explores the effect of two hypnotic agents on plasmatic level of Nesfatin-1 in patients undergoing laparoscopic cholecystectomy.

The authors evaluated the plasmatic level of nesfatin-1 before and after surgery in 40 patients and found no statistically significant difference (before - after surgery) in both anesthetic drug groups and no difference between the two drug groups.

Although the paper contains original and interesting scientific data, some major revisions are needed.

(Since page numbers are missing, the comments refers to the page number from the first page of the manuscript)

1. Methods

   o Page4, Line 50: "patients in the second group received 2% of sevoflurane"; please specify also the O₂ and the air fractions delivered.

   o Please clarify the ventilation during surgery (e.g. provide some information about the PEEP level used during surgery).

   o Page4, Line 60: "10 mg of ephedrine when MAP was <50, and the infusion dose was lowered". Can the authors explain which drug infusion was reduced? Was the sevoflurane/desflurane dosage lowered in case of haemodynamic instability?

   o Page5; The authors calculated a sample size of 42 patients but they state in the methods to have enrolled in the study 40 patients. In table1, the total number of patients enrolled is 42. Please revise this point.

2. Results

   o Page6, table1. There is no reference in the manuscript about how the authors defined "Other comorbid diseases".
There were no significant differences in pre-intubation, post-intubation, intraop15, intraop30, and post-extubation SAP (p=0.498), DAP (p=0.399), MAP (p=0.279), and heart rate (p=0.501) between the groups. Please provide a better explanation of the data acquisition timing in the materials and methods section. Moreover, can the authors explain why they acquired SpO₂ and EtCO₂ data but no information are provided in the results section?

Page7, Table 2: please add units of measurement to the table.

Page7, The authors found no difference in nesfatin-1 increase between the diabetic and non-diabetic population. Algul S. et al.[1] recently found differences in plasmatic levels of Nesfatin-1 between diabetic and non diabetic patients. Can the author provide data about the baseline level in the two groups?

3. Discussion

Page8, Line 35: "Nesfatin is considered an important determinant of postoperative ileus and discharge". Can the authors add a reference to this point? Is there any clinical evidence of this? Did the author evaluate the relation between the postoperative level of Nesfatin-1 and the duration of postoperative ileum?

Page10, Line 33: "stress limited to 30 min increased nesfatin-1 secretion". Please check the reference (Nesfatin-1 production or secretion?).

Page11, Line 16: "The results of studies analyzing stress response to surgery have revealed elevated postoperative nesfatin-1 levels, and reduced bowel motility". Please provide a valid reference for this statement. Did the authors find any correlation between the duration of surgery and the postoperative levels of Nesfatin-1?

Page11, Line 19-38: the authors state that nesfatin-1 levels increase after surgery, but in the results section there is still no significant variation of its levels before and after surgery. Please review the sentence in accordance to your findings.

4. Conclusion

Page11, Line 36-38: the authors state that nesfatin-1 levels increase after surgery but in the results section there is still no significant variation of its levels before and after surgery. Please review the sentence and the conclusion in accordance to your findings.

MINOR COMMENTS

- English grammar revision is needed for some parts of the manuscript (e.g. "entubation", page2; "backgraund", page 2 and 3; "desfluran" and "sevofluran", figure 1)

- Page2: "mean systolic and diastolic arterial pressures": did the author evaluate the average systolic pressure or the mean and the systolic pressure (comma needed)?
- Page3: at the end of the abstract the sentence "peripheral nefatin-levels" can be confusing. "Plasmatic levels of nesfatin-1" can be an option of revision.

- Supplemental material is partially not in English language. Please provide an english translation for a further examination.

- In the "Ethics approval and consent to participate" section the authors refer to the study as a "retrospective" study. The study can be considered, actually, an interventional (prospective) study.

Bibliography


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.

No

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 recommend additional statistical review

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