Reviewer’s report

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

Version: 1 Date: 18 Aug 2017

Reviewer: Martin Schlaepfer

Reviewer’s report:

Summary:

The authors investigate the impact of the anesthetics sevoflurane and desflurane on the postoperative nesfatin-1 levels compared to the preoperative nesfatin-levels. The study was performed in a randomized controlled fashion. 20 patients were included in each group. Neither surgery, nor the type of anesthetic appeared to have a significant effect on the nesfatin-levels.

Strengths and limitations:

Nesfatin-1 has been discovered about 10 years ago and is thus a relatively new target to look at. The strength of the study is the randomized controlled approach and the well-described clinical management of anesthesia in the patients included.

On the other hand, the reason, why the researchers are interested in nesfatin-1 after laparoscopic surgery does not really come clear.

Further if the authors define p<0.05 as "significant", they should only talk about "higher" and "lower" levels of nesfatin, if there is indeed a significant difference.

Major comments:

General comments:

Introduction: The authors give some background about nesfatin-1: they explain, that it was discovered in 2006 and explain some of its pleiotropic effects. I would appreciate to learn the reason, why they study nesfatin-1 in the context of laparoscopic cholecystectomy, what might be the impact for patients when they have altered nesfatin-levels (after laparascopic cholecystectomy) and why they think, the protein levels might be influenced by the type of surgery investigated and by the type of anesthetic (sevoflurane and desflurane).

Methods: As stated above: the whole manuscript has to be adapted (abstract, results and discussion): you cannot talk about higher nesfatin-levels, when your statistical test proved otherwise. You may include in the discussion, that there might have been a significant difference in case your study had had more power.
Discussion: Like in the introduction section, the authors provide many of nesfatin's (discussed) effects, but they don't put these effects into the context of their study. This is urgently recommended.

Specific comments:

p4l40: you cannot talk about higher levels when the difference is not significant!

p9l58 and ff: Your statistical test does not allow this sentence, it should instead say: "Post-operative nesfatin levels in both groups were not significantly increased compared to preoperative levels".

p10, figure 1: Please provide a figure legend explaining, what the figure shows us (boxplots, what percentiles, what are the error bars etc.).

p10l42: postoperative levels were not "higher" according to your statistical test. You may discuss, that there might be a trend in case your study had more power.

Minor comments:

p4l11: background not backgraund

p4l26: "Patients were divided into two groups randomly" change to: "Patients were randomized into two groups"

p6l16: The sentence about the randomization is rather difficult to understand. You might facilitate the sentence by writing: "Prior to anesthesia induction, patients were randomly assigned to two groups using a sealed envelope system."

p6l23: "monitored" not "monitorized"

P6l23: "a 20 gauge catheter" instead of "branule"

p6l45: if patients have been assigned to the group prior to anesthesia induction you have to adapt this sentence. E.g. "For anesthesia maintenance, the patients received 6% desflurane or 2% sevoflurane in 40% O2 and 60% air, according their randomization."

p6l60: The infusion rate was reduced in case of hypotension? Please clarify.

p7l0: I take, you injected "metoclopramide" - please correct

p7l1: intubation not entubation

p10l45-53: please provide references for these statements

p10l55-62: please provide references
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.

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 am able to assess the statistics

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Needs some language corrections before being published

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I have no competing interests with regard to this study, but have received travel honoraria from Baxter Switzerland in 2015.

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