Reviewer’s report

Title: Perioperative incidence of airway obstructive and hypoxemic events in patients with confirmed or suspected sleep apnea - A prospective, randomized pilot study comparing propofol/remifentanil and sevoflurane/remifentanil anesthesia

Version: 1 Date: 17 Dec 2017

Reviewer: Jan Blaha

Reviewer’s report:

The study by Fassbender and colleagues is an interesting study on patients with OSA undergoing surgery. In a pilot study they compared propofol/remifentanil vs. sevoflurane/remifentanil anesthesia and looked at its effect on postoperative nocturnal apnoea-hypopnea-index. As they pointed out OSA is generally underdiagnosed but has substantial risk in surgical patients. From this perspective this is an important study, but nevertheless I have several points first:

Major comments:

Type of surgery - should be described in detail also in Methods. It's mentioned only very briefly in Results, but this is an important part of the study. The types of surgery were breast surgery, eye/ENT or urology, and neurosurgery. This needs more detailed description - especially differences in these surgeries between both groups - as there is for example an important difference in position (disc surgery vs. all others); or different types ENT surgeries might have different effects on postoperative occurrence of OSA.

Postoperative analgesia - any differences between both groups? Were there any additional requirements for analgesia? What was the average dose of morphine in each group?

Minor comments:

Background - there is an explanation of AHI abbreviation missing when used for the first time

Would monitoring of depth of anesthesia bring any additional information?

Data analysis - wrong description of AHI (apnea-hypopnea-indices instead od index)

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

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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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