Reviewer’s report

Title: Association of neuromuscular reversal by sugammadex and neostigmine with 90-day mortality after non-cardiac surgery

Version: 1 Date: 01 Feb 2020

Reviewer: Christoph Czarnetzki

Reviewer’s report:

I am mostly o.k. with the revised manuscript concerning statistical methods.

Since the outcome is the mortality after 90 days, I wonder if the Cox regression is necessary.

The word electronic all over the manuscript should be replaced with quantitative neuromuscular monitor and the names of the devices used should be indicated: like Tofscan, Tofwatch etc... as you indicate that in your institution, the electronic stimulator device was available in all operating rooms for TOF monitoring at the end of surgery.

Were there guidelines in your institution for reversal of neuromuscular block available to which all anaesthesiologists had to adhere? Please state.

The authors write: When neostigmine was used, the maximum dose (50 mcg/kg) was administered for NMBA reversal if TOF was 1 (not ≥ 2). What was done when TOF was ≥ 2? Was the TOF ratio measured and used as guidance for extubation as electronic/quantitative devices were used? With accelometry a TOF ratio ≥ 90 is the safe standard for extubation. Could it be that patients with a TOF count > 1 were not antagonized with neostigmine? Many guidelines demand a TOF count equal to 4 for reversal with neostigmine. So could it be that patients in the neostigmine group at your institution were substandardly antagonised and extubated in the neostigmine group?

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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