Reviewer’s report

Title: The effect of brief pre-anesthetic exercise therapy of jaw and neck joints on mouth opening, neck extension, and intubation conditions during induction of general anesthesia: A randomized controlled trial

Version: 0 Date: 13 Dec 2019

Reviewer: Jonathan Gavin Bilmen

Reviewer's report:

The authors attempt to evaluate the use of a brief exercise regimen to improve the opening and laryngoscopy of patients undergoing anaesthesia requiring intubation. The trial took place over two centres and was randomised as well as single blinded (observer blinded). It appears to be adequately powered based on a pilot study performed a priori. The results of the study showed an improvement in Mallampati scores and mouth opening, though no statistical significant difference in ease of intubation.

The trial has been well designed and executed. The results seem believable and robust. The statistical analysis was easy to follow. The trial was powered against the Mallampati scoring before and after exercise, that being a surrogate for ease of intubation. On this basis, the trial successfully demonstrated an intervention that improved outcome.

A few points I would ask to be modified:

Page 5, line 41: Capital 'P' please

Page 7 line 35 - 'raised it up' - please can you clarify what is meant by this?

Page 15, line 8' The exercise intervention in our protocol was to increase' - I would edit this to read 'was intended to increase'

Page 17, line 16 - I would suggest that the word 'would' is changed for 'may' as IDS scores haven't changed and the subgroup analysis is post-hoc, which while interesting, has not been independently validated.

Table 2 & 3 & 4: Explicit description of which statistical test was used (i.e. Student's t-test of Chi-square etc).

I would suggest a line or two about further work: This could be to explore Grade III/IV MPS score patients to see if benefit from exercise much more significant. Also, I would be interested to see in future if regular pre-op exercise had a greater benefit (i.e. leaflet to patients to ask to start exercising 1 week before?)

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:

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