Reviewer’s report

Title: Paranasal sinus air suction for the treatment of acute migraine – A randomized, double blind, pilot Study

Version: 1 Date: 07 Nov 2018

Reviewer: Catello Vollono

Reviewer's report:

Comments to the Authors
Dear Authors, Dear Editor,

this is an interesting study evaluating the efficacy of paranasal air suction as symptomatic treatment of migraine.

In the present study, the Authors assessed a non-pharmacologic therapy in acute migraine.

The therapeutic method assessed is interesting and probably without relevant side effects.

The availability of alternative therapies, particularly in young subjects, is an important topic. The authors reported their findings in a relatively clear presentation.

Certain major revisions are needed and may help the strength of their efforts. Subsequently, I have several concerns regarding the methods as well as the results and the interpretation of their findings.

1. The Authors should explain more extensively how the perception of suction was similar in the control group and in treated group. In my opinion, the perception of the suction is important for the 'placebo effect'.

2. Single measurement of both pain intensity drop and tenderness over sinuses only 60 seconds after the application of the device are poor predictive of real efficacy of the treatment.

3. Data on pain relief (at 30, 60, 120 minutes) and on recurrence (at 24 hours) would be needed, as the observation period is too short to establish the efficacy.

4. Consensually, I suggest that the Authors change in this way, the discussion and the conclusion of the study.
5. The Authors could discuss more extensively how the paranasal suction is able to discriminate sinusitis from migraine and if they used other methods to exclude the diagnosis of sinusitis or turbinate hypertrophy.

6. The Authors could take in account and discuss that other mechanisms to interpret effectiveness (for example pressor modifications).

7. No data on safety or side effects are reported.

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.

Unable to assess

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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