Peer Review File

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Reviewer A:

Thank you for your submission to the AJO.

This is a case series evaluation of surgery for the treatment of patients with severe OSA who are CPAP in tolerant.

I have no objections to the publication of this study. One minor typographical error should be corrected

- line 166 the sentence is truncated and should probably read 50% reduction in AHI

Reply A:

Thank you for your comments. This sentence has been corrected to "The primary outcome was the change in AHI (events/hour). Secondary outcomes included the achievement of "surgical success" which was defined as a postoperative AHI < 20 and a 50% reduction in AHI."

Reviewer B:

A very well written paper, with good outcomes and discussion. It recognized the limitations of the study.

A few questions and corrections

1. Line 169 – serious adverse "events" – add

2. Were there any exclusions regarding BMI?

3. Was this a single surgeon performing the surgeries? If so, this should be mentioned in the methods.

4. How many patients were completely free from CPAP use post-op? Or did all patients still need CPAP post-op? This should be included in the results.

Reply B:

Thank you for your review.

1. *This has been corrected and now reads "Serious adverse events were defined as resulting in patient death; life-threatening illness or injury; permanent impairment of body structure…"*
2. *There were no exclusions to BMI.*
3. *This was a single surgeon performing the surgeries. Line 140 now reads "All patients underwent single or multiple-stage multilevel airway reconstructive surgery by a single sleep surgery fellowship-trained otolaryngologist"*
4. *There was a single patient who returned to CPAP use post-operative and this is noted on line 198.*

Editorial Comments

1. It seems that "salvage" is too broad in the title. Could the authors consider modifying the word to better inform the reader?

This has been removed.

2. The authors should define the abbreviation "CPAP" when used for the first time in line 64 in the abstract.

This has been defined.

3. The authors may want to consider adding the mean difference and 95% CI of the primary and secondary outcomes to the Abstract.

This has been added to all normally distributed values.

4. Please ensure that the key elements of the retrospective study design are included in the methods section of the abstract, such as the location (city, country) of the study, the setting (mono/multi-center, primary/secondary/tertiary care), the type of sample enrollment (consecutive, random, or convenience), and the statistical methods.

This has been updated.

5. "When adherence to CPAP is defined as four hours or more per night, 83% of patients are reported as non-adherent (9)", suppose 83% to be a definite number. It would be better if the authors provided a range of numbers.

A range has been included.

6. "Patients who demonstrate they cannot adequately meet CPAP adherence standards should be considered for alternative therapy, including positional treatment … for example, low body mass index (BMI), smaller tongue and large tonsils", please add citations to back up the statement.

A reference has been added.

7. Lines 143-144, "All patients had at least level 2 polysomnography at baseline", the readers of AJO are from a broad academic background, and level 2 PSG maybe unknown to young readers. Consequently, we recommend giving it much more information of PSG.

Detail has been given regarding polysomnography.

8. We prefer a more detailed description of the qualification or experience of the otolaryngologist.
This has been updated.

9. The authors should indicate the definition of AHI in the patient eligibility part.
This has been defined.

10. Please report the level of testing for the P value, and whether the P value was a one-sided or two-sided test in the Statistical analysis section.
This has been updated.

11. The authors only present the number of participants in the final stage. We suggest the authors use a flow diagram to report the number of participants at each stage (from the choice of a target population to the inclusion of participants' data in the analysis). Explicit reasons for each exclusion with numbers should also be listed.
Unfortunately, data was collected only for patients where surgery was undertaken. We do not have a feasible means of accessing all other consultations where patients were rejected. We have acknowledged in the discussion that this strict inclusion and exclusion criteria means that this is a narrow population, nonetheless, there is significant improvement in this select group. We recommend in the discussion that a prospective study would be a ideal.

12. Line 211, “Postoperatively one patient retrialed CPAP usage”, we just wonder if the outcomes were optimized after retrying CPAP.
It is probable that retrying CPAP in this one patient did adjunctly improve the OSA parameters, although we do not feel that this is a major component and their results did not deviate greatly from the other participants. We aimed to provide a reflection of our clinical, "real-life" experience and patients should be encouraged to retrial CPAP if they can tolerate it. We have acknowledged in the discussion that the one patient who retrialed CPAP is an adjunctive measure, however it does not detract from the overall, significant improvement of surgical treatment.