Reviewer's report

Title: Comparison of Inpatient vs. Outpatient Anterior Cervical Discectomy and Fusion: A Retrospective Case Series

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Reviewer: Alan T Villavicencio

Reviewer's report:

The data provides some useful information, but not as the study was designed and presented. The group assignment completely confounds and invalidates any conclusions proposed. That being said, it would deserve publication in the journal if the following issues were addressed:

Major Compulsory Revisions:

1. The allocation into the inpatient and outpatient groups is methodologically unsound and particularly biased by the decision to admit 17 patients from the group that was initially planed as the outpatient. Also, the authors admitted that “the higher average age and number of comorbidities in the inpatient group reflects the greater likelihood of selection for inpatient surgery”. As one of the possible solutions to this would be changing the study design to analyze the possibility of occurring complications in regards to comorbidities, advanced age and other factors (previous surgeries, blood loss etc). Another solution would be to analyze data as one group, which would be at least methodically correct.

Minor Essential Revisions:

2. The purpose of the study should be clearly stated. If it was to evaluate clinical outcomes (as the conclusion in the abstract indicates), then the methods that were chosen are completely incorrect. The allocation into two groups could affect the outcomes only indirectly, mostly through complications. It seems that the purpose of the study was to assess the safety, so the conclusion (see Abstract) should reflect such intentions.

3. It should specify how many of these 17 patients had complications?

4. The range of the follow-up and duration of hospitalization should be indicated.

5. Looks like something similar to Odom’s criteria was used to evaluate clinical outcomes, however I would not call “no improvement in symptoms” the fair outcome – this needs to be revised.

6. The contradicting numbers (or rather opposite) are reported in Results (see Abstract and page 5) for in- and outpatients.

7. The citations should be thoroughly revised, e.g. Villavicencio et al. never reported hospital stay costs ranging from $6,700 to $9,700, this was done by Castro et al. and McLaughlin et al. as referenced in the mentioned paper. In addition, the paper incorrectly states that patients with myelopathy were excluded.
in Villavicencio et al. paper (please see Table 2). Consequently, I would suggest removing the statement about the uniqueness of this study on page 9.

Discretionary Revisions:

8. Would suggest to compare demographic and clinical patient data side by side and perform statistical analysis, then address the differences. It looks like patients in the outpatient group were younger, healthier. Any previous cervical spine surgeries?
9. It should be described how complications were assessed.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'