Reviewer’s report

Title: Health Related Quality of Life: a retrospective study on local vs. microvascular reconstruction in patients with oral cancer

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Reviewer: Jose Leopoldo Ferreira Antunes

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This study compared health-related quality of life among two groups of patients with oral cancer submitted to different treatment protocols after surgery for tumor resection. This theme is relevant to oral health research; the research effort in assessing information on 88 patients is considerable.

The main problem in this manuscript is its telegraphic style. All its sections are smaller than they should be, in order to convey sufficient information.

This study is observational; it indeed is not a clinical trial. Anyhow, the allocation of patients to the LR and the MVR group is not explicit. What conditions influenced the treatment option?

Authors stated that they observed UICC criteria for cancer staging. However, they solely classified tumor size. I also missed more information on the localization of the tumor. Authors should inform the respective codes of the International Classification of Diseases, 10th revision. The alveolus is not a category of localization for OSCC in ICD-10. Maybe the authors referred to gum cancer (C03)? Many patients had cancer at the buccal mucosa. Are the authors referring to the cheek mucosa (C06.0)? Are other subsites of the mouth included?

In Methods (last sentence) authors mentioned that their sample size was limited to adequate tumor patients. However, they had not mentioned any criterion for the enrollment of patients; who would be inadequate tumor patients?

The results (graphs and tables) are mainly descriptive; the authors used the t-test to make some comparisons. No attempt of assessing mediation or confounding of relevant covariates! In Results and the Abstract, I have not understood the reporting of two average scores (84.8 and 85.8 points) for an overall "very good" HRQOL in the LR group, and two average scores (71.9 and 74.7 points) for an overall "good" HRQOL in the MVR group. What does this mean? Why two scores for each category? Why have you used "very good" HRQOL for the former group and just "good" HRQOL for the later?

The acknowledgment of study limitations is poor. Authors mentioned that there are various limitations, though they described solely one. Not a word was spoken about the absent adjustment for covariates; the substantial (and non-uniform) interval from surgery to the filling of the HRQOL questionnaire.
Results reported here are consistent with the hypothesis that "microvascular free flaps enable to reconstruct complex anatomic defects while maintaining favorable overall quality of life." Notwithstanding, this study does not allow to conclude assertively on this subject.

Nor does this study allow concluding that "quality of life decreases with floor of mouth localization." This comparison lacks an explicit reference category and effective control for covariates. That "implementing HRQOL questionnaires for assessment of quality of life could further increase the treatment quality of patients with oral cancer" is just an expression of goodwill, which could have been stated even previously any study had been done. It is not a valid conclusion for this study.

In the Abstract, line 31 (Background), I suppose authors were referring to tumor site instead of tumor side; please check.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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?
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No

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I am able to assess the statistics

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