Review of: "Assessment of the differences in the use of free iliac flap for maxillomandibular defects with patient-reported outcomes"

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Potential competing interests: No potential competing interests to declare.

Thank you for the opportunity to review this work.

Firstly, congratulations to the authors on the complex surgeries performed.

There are several areas of the manuscript which could be improved before being sent to a journal for publication, as well as improving the reporting of the research done. I would like to suggest the authors to go through the STROBE checklist and follow the instructions before re-writing the manuscript for submission. It is accessible here: https://www.equator-network.org/reporting-guidelines/strobe/

The title needs to be more specific and include the study design, if possible. It is unclear what the differences mentioned by the authors are, is it the difference between the patient's perspective vs. the clinicians, or the outcomes of free iliac flap compared to other kinds of reconstruction? It would perhaps be better to modify the title to something like “Patient-reported outcomes following reconstruction of maxillomandibular defects with the free iliac flap - a retrospective observational study”. Although it is mentioned later that the study is retrospective, wouldn't the patient cohort have reported their outcomes prospectively?

The background section of the abstract does not mention why the study was conducted, what is currently written is more suitable for aims and objectives. The need to use free iliac flap in the clinical setting of the authors will have to be explained/justified, compared to the standard method of reconstruction with the free fibula flap.

In the results section of the abstract, it would be better to mention the age range of the patients rather than the average age. Since the authors have mentioned that most of the defects were following gunshot injuries, I am interested to know whether the reconstruction was attempted in the primary sitting or the secondary sitting, as that would impact the outcomes. It would also be useful to mention whether the iliac flap was used to reconstruct both soft tissue and bony defects, rather than the break-down of kinds of defects noted, since this is only the abstract. The most important outcome to be reported here would be the success rate of the flaps. I am unsure why blood transfusion rates were mentioned here, when there is a lack of a comparison group. Also, wouldn't a patient with a gunshot injury have lost more blood than a patient undergoing elective surgery for a mandibular tumor or oral cancer? A break-down of the types of complications encountered would be more relevant here. I am also interested to know what the authors mean by the patients being able to eat a normal diet - after a mandibular reconstruction, we typically instruct patients not to consume any hard diet for three

months - did the authors assess the patient-reported outcomes at 3 months or earlier? For objectively reporting outcomes like speech, social activity and even physician-reported outcome of appearance/aesthetics, it would be better to use a validated scale for each for scientific accuracy and reliability. Did the authors use any such scales? If not, can a prospective assessment be done for the same cohort of patients using questionnaire-based or physician-reported scales?

Introduction: “Harvested” is a better word than “lifted” when describing flaps. It is unclear why it is mentioned that various defect classification systems exist, since it does not seem relevant to the research question.

Materials and methods: the word “necessary” has been overused. This would be a good place to mention what questionnaires were used, when and by whom they were administered, and whether they use any scoring system to arrive at a conclusion. A grammar check would be useful for this particular part of the manuscript.

It would perhaps have been better if the surgeons who evaluated the aesthetic outcomes were not involved in the primary surgery, to avoid bias.

Results: It is noted that bone was preserved and soft tissue removed in patients with total flap loss, if so, why has it been termed total flap loss? It is not mentioned whether the dental implants were placed at the primary sitting or at a later stage, why the implants failed as per the surgeons. Once again, if the time at which the questionnaires were administered was mentioned, it would be helpful to know why the last four patients were excluded.

Discussion: The unique point of this study is that the study population is different from that noted in literature - I would suggest the authors to highlight this fact in the title, abstract and introduction. It would also be good to know what is predominantly done for patients of trauma world-wide. I would like to know why the total number of osteotomies was given - it would perhaps be more useful to know the number of patients who required an osteotomy vs those who did not, especially for total mandibular defects. In our experience, osteotomy is not a usual cause of flap loss, have the authors experienced this? Also, since majority of patients had attempted suicide by gunshot, what other associated facial injuries were noted and how were they managed? Where the average mobilisation time was given, do the authors mean 2-6 days instead of “6,2 days”? Use of standard punctuation would give more clarity.

The average blood transfusion rates were given - did the authors compare fibula free flap to iliac crest for a similar cohort of patients? The average hospital stay is given in days, but a range would be more illustrative of the difference between literature and the present study, with factors leading to a longer stay explained. Rate of tumor recurrence is calculated with the wrong denominator - it should be 2 of 9 patients and not 2 of 25.

The entire paragraph starting with “One of the patients with a gunshot injury. After ….” and the first part of the following paragraph need to be rewritten for clarity as it was difficult to follow the narrative.

The term “wound dehiscence” is preferable to “wound separation”. In our experience, the term “plate” is used instead of “plaque” - can the authors explain if both mean the same or if there is a difference? Were the incisional hernias repaired using a mesh?

For functional evaluation of patients by their own assessment and by the surgeons, the questionnaire components are

non-specific and seem arbitrary, so it is difficult to say whether it is scientifically reliable or accurate. What exactly was considered good or bad? Since a good number of patients were suicidal prior to the procedure, could this have impacted how they rated their outcomes? Were they offered any counselling or psychiatric evaluation before administering the questionnaire?

Overall, the manuscript needs a thorough revision, reorganisation for a better flow of the narrative, grammar and punctuation checks before being considered for publication.