Reviewer’s report

Title: Age- and sex-specific effects on weight loss outcomes in a comparison of sleeve gastrectomy and Roux-en-Y gastric bypass: a retrospective cohort study

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Reviewer: Michel Suter

Reviewer’s report:

Thank you for the opportunity to review this manuscript, in which the authors try to identify preoperative factors affecting results of the bariatric procedures after 1-2 years. This study has several important limitations, many of which are not addressed sufficiently in the section on limitations in the discussion. Despite these shortcomings, this paper could be accepted for publication if the authors addressed the following comments:

1. The retrospective character of this study introduces biases in the procedure selection. Even if patients with BMI > 60 are excluded, the two groups are not entirely similar at baseline.

2. There are several statistics between subgroups, on the base of which authors make conclusions, or at least suppositions, but the risk of a type 2 error in this type of subgroup statistics is very high. This limitation should be addressed separately in the discussion.

3. In Fig 2, the BMI curves are presented with the SE. In this type of graph, I want the SD, which gives a much better overview of the distribution of data within the group. We know this differs very significantly between bariatric procedures.

4. Your attrition rates after only 2 years are high (more than one third). This should be addressed as a serious limitation (and the fact that patients followed and not followed did not differ at baseline does not mean that they are still equal in terms of results after 2 years).

5. Page 4, last line: the available studies show no difference between RYGBP and SG. OK, but you must underline that results are only short-term. No mid (3-5 years) or long (>> 5 years) results have been published. Please underline this limitation in the available literature.

6. Apart from the retrospective character of your study, the main limitation is your limited duration of follow-up. This limitation must be underlined clearly. You have absolutely no idea whether theses differences will remain over a longer period or no.

7. The fact that several tables are available only as complementary material is unfortunate. You have to go through them, for instance, to realize that the groups are dissimilar to begin with, since the authors do not report this in their result section.

In other terms, many of your results are based on underpowered statistical
analyses and too short a follow-up period, not to mention the fact that the two groups were not matched or randomized. The results are certainly interesting, but not sufficient to convince me that I have to change my policy in deciding which operation for which patient.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

No competing interest