Author’s response to reviews

Title: VARIATIONS IN DIABETES REMISSION RATES AFTER BARIATRIC SURGERY IN SPANISH ADULTS ACCORDING TO THE USE OF DIFFERENT DIAGNOSTIC CRITERIA FOR DIABETES

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Version: 1 Date: 21 May 2017

Author’s response to reviews:

Review

Manuscript Number: BEND-D-17-00047

Title: DIAGNOSTIC RECLASSIFICATION OF TYPE 2 DIABETES FOLLOWING BARIATRIC SURGERY.

Title

Line 1-3: We have changed the title to improve it.

Abstract

Conclusion

1. It is not clear to me how the diagnosis of T2DM remission was similar using both scales. The Spanish association criteria identified 11.8% more people with complete remission, and the ADA criteria identified more than double the number with partial remission. Are you just basing your statement on the Spearman correlation coefficient?
2. Even though the criteria gave similar results (not convinced – see above) and they have a high degree of correlation (correct according to the Spearman's coefficient), because ADA criteria are stricter therefore they are more correct and should be used? You haven't shown that in your study. And it wasn't the purpose of the study to see what criteria is more correct, was it?

We are just based on the Spearman correlation coefficient, but we think that now you can understand better the results: In our series used more stringent criteria for defining DM2 remission results in a lower rate of remission, although both scales showed a high degree of correlation. The purpose of our study wasn't show what criteria are better, so we have changed it.

Introduction

1. Line 65 – you should reference the statement “over 60% of DM2 patients are obese”. It is reference 1.

2. Line 67-68 – I wouldn't say “unsuccessful” (also based on your references) but “successful in a smaller percentage compared to bariatric surgery”. We have corrected it.

3. Lines 75-77 – You should reference that statement such as which authors consider withdraw of medication enough and which authors suggest using FPG/HbA1c. We have added the references.

4. Lines 88-92 – Should it be establishing instead of established? Other authors? Authors within the Spanish scientific community or other authors in general? Not a very clear phrase. It is establishing. We have clarified it: Sánchez-Pernaute and Scopinaro have proposed using the ADA’s HbA1c cut point for diagnosis of DM2 (11,20).

5. Line 92 – would it be worth taking out the “Hba1c” and just leaving the ADA criteria. We have corrected it: The aim of this study is to compare DM2 remission rates 5 years after bariatric surgery using the criteria approved by Spanish associations and the ADA’s criteria for diagnosis of DM2.
Materials and Methods

1. Line 123 – Formula a bit confusing – use brackets: \([\text{initial weight} - \text{follow-up weight})/(\text{initial weight} – \text{ideal weight})]\) \times 100. Corrected.

2. Line 99-103: What were the exclusion criteria? We have included the exclusion criteria. All study patients had a preoperative diagnosis of obesity, with body mass index (BMI) \(\geq\) 35 kg/m² and DM2; and had at least 3 years of follow-up with documentation of FPG, HbA1c levels, and body weight. Patients who underwent reoperative bariatric surgery including conversion and revisional and reversal procedures were excluded. Those undergoing bariatric surgery with a different technique were excluded too because of their low incidence.

3. Pag 152. Was the length of diabetes recorded? It was no recorded.

4. Was weight gain post bariatric surgery recorded? And if yes, at what time point post-surgery was it recorded? (1 year, 2 years) How many relapses were there? It wasn’t recorded.

5. Is there a database with all the patient information or was the data collected from medical charts? The data was collected from medical charts.

Results

1. Did you calculate the power of the study? Was the study powered? We didn’t calculate the power of the study.

2. Were all the variables normally distributed? If not the results should be expressed in median and IQR. All the variables are normally distributed.
3. Were all these variables recorded 5 years post-surgery? All variables were recorded 5 years post surgery.

4. Did the patients in the remission group have a shorter duration of diabetes? We have not recorded the duration of diabetes.

5. I can’t find Figure 1 anywhere. We have excluded it because only repeat dates.

6. Line 172. Were the patients with no remission more likely to have been on insulin? Yes. We have included the results.

7. The statistical analysis in the results and Table 3 are not very clear. Would you mind clarifying it? (Both in the revision and in the text) Did you do a 3 way analysis for each of the criteria? What test did you use? If you were looking at similarities between the two sets of criteria, shouldn’t you have compared patient’s characteristics with complete remission diagnosed by the Spanish criteria with patients with complete remission diagnosed by the ADA criteria (etc for the partial remission and no remission groups)

We did a 3 analysis for each of the criteria, we used an Anova test. We were looking differences between groups, but did not compared patients characteristics between categories inter group.

8. Lines 171-177 – do you want to expand/detail the differences? because of 81 patients defined as complete remission with the Spanish criteria, according to ADA criteria 59 were complete remission, 21 partial remission and 1 classified as non-remission. Thirty-five (35) patients classified as non-remission according to the Spanish reclassification were also considered non-remission due to the ADA reclassification plus 1 classified as complete remission and 1 partial remission respectively by Spanish reclassification.
Discussion

1. Lines 180-181 – In table3, in the Spanish criteria group, patients with no remission lost more weight than the partial remission group. Also, same lines- should the citation be after “remission” not after “our series”? The reference is changed. This was found to be true in our series, except between the partial remission and no remission in the Spanish criteria group, but the differences were not significant.

2. Line 185 – you don t need references when you’re talking about your own study results. Changed

3. Lines 186-188 – Again, you don t need references here. Review parenthesis. It’s not a lower rate of remission, because it’s the same patient – it’s just the category/classification that changes- instead of being categorised as total remission he would be categorised as partial remission. Our findings also show that more stringent criteria for defining DM2 remission results in a lower rate of complete remission categorised as total remission instead they would be categorised as partial remission (63.8% under Spanish criteria vs. 52% complete remissions following the more stringent criteria [HbA1c < 5.7%] of the ADA).

4. Line199 – Mention the results in the meta-analysis with the Roux en Y bypass (the majority of the surgical procedure used in your study) and what criteria for remission they used. It is incluyed: ), remission rates varied considerably (54.9%-95.1%), depending on the type of surgery or definition criteria used (FPG < 100 mg/dl or HbA1c < 6%).

5. Line 204 – When you say “false expectations”, is there a study that showed initial higher rates of remission and then on further follow up showed lower rates of remission. If yes – you need to reference it for that statement. Otherwise you can’t make that statement. We have added: for example in the SOS study the 2-year diabetes remission rate of 72% in declined to a 36% remission rate at 10 yearsA.
6. Line 203-206 – Also mention that their mean BMI was lower than in your study and also the percentage of patients on insulin in their study was higher than the percentage of people on insulin in your study. We have included: There were some differences between these studies; their mean BMI was lower than in our study (43.6 ± 5.5 vs 50.9 ± 7.6 kg/m2) and also the percentage of patients on insulin in their study was higher than the percentage of people on insulin in our study (44.5% vs 19.7%).

7. Lines 202-207 – Do patients on insulin have lower remission rates? Do patients on the new oral antidiabetes medication (SGLT2, GLP1) have better remission rates and weight loss? This a possible limitation of the study. Patients with new oral antidiabetes medication has not studied, because our results are from 2001 to 2009, and in Spain we could not used them.

Table 1 and 2

It would be easier to follow if you would colour the sections in with you analysed the patients (eg complete and prolonged together) It was just confusing as it felt you highlighted 3 out of 5 sections and I didn’t know why. Maybe even no highlight and just separate by lines.

Table 1 title is in bold; table 2,3,4 title is not. We have changed it.

Table 3

See comments above – clarify statistical analysis. We have clarified.

Again, couldn’t t find any figure. We have changed the figure, and we add it.