Reviewer's report

Title: Absorbable suture can be effectively and safely used to close the mesenteric defect in a Gastric bypass Sprague-Dawley Rat Model

Version: 0 Date: 17 Sep 2019

Reviewer: Sonja Chiappetta

Reviewer's report:

Congratulations to the authors for this basic research animal study.

Internal hernia (IH) is an important long-term complication after especially Roux-en-Y gastric bypass in obesity surgery and IH is recognized the most frequent cause of small bowel obstruction. Incidence of IH is in the range of 1-5%. Mean time to intervention for internal hernia repair is reported to be after 413 +/- 46 days and after an average excess body weight loss of 59% +/- 3.3 (Ahmed AR, Rickards G, Husain S, Johnson J, Boss T, O'Malley W. Trends in Internal Hernia Incidence after laparoscopic Roux-en-Y Gastric Bypass. Obesity Surgery. 2007; 17: 1563-1566).

This basic research study compares 5 different groups regarding closure of the Peterson defect to demonstrate the non-inferiority of absorbable sutures. The idea of the study gives important knowledge to the current clinical practice, nevertheless some major revisions have to been performed.

1. Please let the manuscript be checked by a native English speaker.

2. Abstract: The objective is to demonstrate the non-inferiority of absorbable sutures. Please state more precisely.

3. Background:
   - Please rewrite introduction more specified regarding internal hernia as a long-term complication after Roux-en Y Gastric Bypass in Obesity Surgery:
     - Incidence?
   - Explain different parts of internal hernias: the three classic locations for IH after antecolic RYGB are Peterson Space (between Roux limb´s mesentery and transverse mesocolon) mesenteric defect and Brolin space (at the jejuno-jejunosotony)
   - Mention current discussion to close or not to close the defects (kinking vs internal hernia, Stenberg et al. Lancet 2016)

4. Methods: Since mean time to intervention for internal hernia repair is reported to be after 413 +/- 46 days, you have a quite long follow-up with 5.4 human years - thus it is not a limitation of the study (see discussion)
   - Preoperative care: you repeat that study was approved. How was food intake measured=
   - Surgical procedure: Closure of mesenteric defect was performed with a single or continuous suture? Please specify.
   - Statistics have to be controlled by a statistician. Adhesion score is a scale variable. You describe that "all data" are expressed as mean and SD. Which are the data you have analyzed? Adhesion score? Food intake and Body weight loss? Please describe the variables better.
5. Results:
- Operative results: Did you had complications during the surgical procedure? Please specify.
- Food intake: How was it measured?
- What was mean body weight? Please provide. Did you use obese rats? What do you want to show presenting body weight loss? That it was equal and did not influenced the formation of internal hernia (loss of visceral fat equal in all rats?) - please specify in the methods or discussion section
- Discussion:
- Limitations: I do not think that absence of internal hernia is related to a short follow-up - your FU is 5.4 human years - this is a long FU (see above). It could be more associated to the limb length.
- Discussion/Conclusion: You did not show that closure with absorbable sutures is safe and feasible - but you have shown that it creates a safe adhesion score. Don't mix. Please control the hole discussion regarding the scope of you study - the non-inferiority of absorbable sutures -specify on the results of the adhesion score - not that is feasible and safe, but effective regarding the other procedures.

6. Declarations: Ethics approval: you state: "not applicable" - but you had an ethical approval to perform this animal study, as mentioned in the Methods section

7. Figure 2: you should provide some data, f.e. mean and p-values

8. Figure 3: great figures - congratulations

9. Figure 4: not clear - for example show only the statistic significant comparisons

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

Yes

**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?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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