Reviewer’s report

Title: Functional Outcomes after Resections for Low Rectal Tumors: Comparison of Transanal with Laparoscopic Total Mesorectal Excision

Version: 0 Date: 23 Apr 2019

Reviewer: Léon Maggiori

Reviewer's report:

The authors present here a comparison of the TaTME and standard lapTME techniques regarding functional outcomes. This is an interesting topic. I have however several comments:

. In the methods section, the authors claims that "All anastomoses were performed with circumferential mechanical stapler". This is surprising as we are talking about low rectal cancer. Any intersphincteric dissection with handsewn anastomosis? Furthermore in table 1, some patients indeed seemed to had an handsewn anastomosis. This should be clarified and the type of anastomosis should be included in the analysis of both LARS and wexner score predictors.

. How was "anastomotic leakage" defined? This should be clearly defined. Furthermore, as all severe complications (DINDO≥3) seem to be related to leakages (as described on table 4), the management of such leakages should be clarified. What was done during reoperation procedures?

. Did the authors performed some CT-scan or Contrast studies before stoma reversal to check for leakages? If yes, did some patients presented with leakages on those studies? If yes, this should be included in the leakage group.

. There is no data on the type of reconstruction. Straight anastomosis? J-pouch? side-to-end anastomosis. This should be clarified and included in the analysis of risk factors for impaired function.

. The authors state in their conclusion that TaTME is "non-inferior" to LaTME regarding postoperative function. This study is not adequately powered to be a non-inferiority study and this conclusion should be toned down.

. The authors state that only tumors < 5 cm from the anal verge are included but in table 1, patients seems to have a mean tumor from anal verge distance of 4.3 +/- 1 cm. Please confirm that only low rectal cancers are included.

. In the methods, the authors state that a multivariate logistic regression model was performed but I am not able to find its results in the manuscriot.
. Did some patients underwent postop chemotherapy? if yes, this should be state and compared between groups.

. The abstract should be modified to also include results of the wexner score

. Any locoregional recurrence observed during follow-up? This might impact functional outcome and should therefore be disclosed.

. What type of chemotherapy was performed during neoadjuvant radiotherapy?

**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.

No

**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

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