Reviewer’s report

Title: Robotic radical antegrade modular pancreaticosplenectomy (RAMPS) versus standard retrograde pancreatosplenectomy (SRPS): study protocol for a randomized controlled trial

Version: 0 Date: 04 Nov 2019

Reviewer: Jaw Yuan Wang

Reviewer's report:

Authors aim to conduct a prospective randomized controlled trial (RCT) to compare short-term surgical and oncological outcomes of robotic anterograde modular pancreaticosplenectomy (RAMPS) and standard retrograde pancreatosplenectomy (SRPS) for patients with distal pancreatectomy through a single institution in 246 eligible patients with pancreatic body and tail cancer. The primary endpoints are oncological outcomes (R0 rate, number of lymph node) and secondary endpoints are the perioperative complications, perioperative indicators (operative time, blood loss, blood transfusion volume, costs). Authors anticipate this randomized controlled trial will make the RAMPS procedure that may become a standard approach to robotic pancreatosplenectomy.

Major Compulsory Revisions:

1. Trial registration. ClinicalTrials.gov or the World Health Organisation International Clinical Trials Registry Platform is highly recommended not only by local trial registration. Please add the timing of first patient enrolled.

2. Background. The Study rationale and Objectives paragraphs should be added.

3. In Background section: Compared with SRPS, RAMPS showed significant improvement in R0 resection rate and 5-year survival rate [5, 6]. Please cite more recent references to demonstrate the advantages of RAMPS than SRPS, especially the previous randomized trials. In addition, the following sentence: Robotic surgery is becoming the mainstream of abdominal surgery in the future [11]. However, authors only cite the reference titled "A single-team experience with robotic pancreatic surgery in 1010 Cases" from the local journal?

4. In Method section: Authors should add the relevant information of the patients that they would enroll, for example, patient's stage and age limitations etc.

5. In study setting: A single-center, randomized, phase III study. Why the current study is categorized into a phase III study?

6. In Endpoints paragraph: The primary endpoints are oncological outcomes (R0 rate, number of lymph node) and secondary endpoints are the perioperative complications, perioperative indicators (operative time, blood loss, blood transfusion volume, costs). The above statement was mentioned in the Abstract section; however, the detailed information were lack in the text or Tables. Moreover, authors wished to set 2 primary endpoints in the analysis?
7. In Sample size paragraph: Determination of the postoperative marginal resection rate is the main endpoint of this study. Published literatures with large sample size (n > 100) of distal adenocarcinoma demonstrate R0 resection rate of 50%-74% [13, 14]. A systematic review of radical antegrade modular pancreatosplenectomy which identified 13 observational studies involving 354 patients undergoing RAMP showed that the R0 resection rate was 88% [15]. According to these studies, we used a two-sided log-rank test with 80% power at the 0.05 level of significance requires 123 patients in each group (NCSS and PASS 11 (NCSS Statistical Software, Kaysville, UT, USA)). Therefore, the total sample size required is n = 246 patients. This part must be extensively revised as the R0 resection rate of 50%-74% by SRPS, therefore, it should be a wide variation in the estimation of sample size. Furthermore, the estimation of dropout patients should be included into the final sample size.

8. Inclusion criteria: It meets the indications of resection of pancreatic somatococcygeal carcinoma by robot. Please clarify it as the procedure needs an expensive medical fee by patients.

9. Exclusion criteria: Patients with major complications who cannot tolerate surgery? Major comorbidities?

10. Participating surgeon: Our surgical team consists of three doctors who are all skilled at using Da Vinci robotic systems for RAMP and SRP, so how many above surgical procedures in each surgeon have done before? 40 RDPs experience means that each surgeon did it based on which procedure?

11. Terminations/withdrawals and Trial timeline paragraphs were lack in the Method section.

12. Data collection and statistics paragraph: The detailed statistical analysis methods were not shown here.

13. Interim analysis paragraph is also needed.

14. Abbreviation paragraph: several abbreviations were not found in the text.

15. In Figure 1. Please fill it out the potential patient numbers, not just leave it blank there.


Minor Essential Revisions:

1. Please correct the typo and grammatical error by an expert good at English editing.

2. Table. 2 Flow chart of the trial. Please enhance this part with more detailed information.
Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

Quality of written English
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Not suitable for publication unless extensively edited

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All images and figures within the manuscript should be genuine i.e. without evidence of manipulation. No specific feature within an image may be enhanced, obscured, moved, removed, or introduced. If you have concerns about the veracity of the figures you should choose the first option below.

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