

Dear Editor and Reviewers:

Thank you for your letter and the valuable comments provided by the reviewers regarding our manuscript titled “Robotic natural orifice specimen extraction surgery I-type F method versus conventional robotic resection for lower rectal cancer” (Manuscript No.84386). We greatly appreciate the feedback, which helped us enhance the quality of our paper, and provided valuable guidance for future research. We have studied the comments carefully and made the necessary corrections to address them. The main corrections have been incorporated into the manuscript and our responses, which are highlighted in blue, to the reviewers’ comments are as follows.

Response to the reviewers’ comments:

Reviewer #1:

1. To publish in an English journal, still requires some grammar/language/syntax editing.

Response: Thank you for your comment. We have revised the English language of the revised manuscript. If there are any further issues, please let us know, and we will address them accordingly.

Reviewer #2:

1. It is recommended that the author discuss the limitations and shortcomings of the R-NOSES I-F in this paper in order to improve them in the future.

Response: We sincerely thank the reviewer for the careful reading. In the revised manuscript, we have discussed the limitations and shortcomings of R-NOSES I-F.

Combined with surgical experience, we believe that R-NOSES I-F has the following limitations and disadvantages: (1) R-NOSES I-F uses the principle of intestinal entrapment to exenterate the intestinal segment to be resected

and dislodge it outside the body; therefore, it requires upward high freeing of the descending colon during the procedure, which increases the difficulty of the surgery; (2) We placed the oval forceps through the protective sleeve to the pre-excision site of the bowel lumen, and the oval forceps was fixed with sutures to the bowel lumen. This single-point suture fixation method places the intestinal wall under greater tension and carries the risk of intestinal tearing.

To address these disadvantages, we propose to improve this method: a metal rod with a large head end and a small tail end (similar to a mushroom shape) is used instead of oval forceps, and then the neck of the metal rod and the colonic intestinal wall are tied under the robotic view; the specimen is then dragged out, which can greatly reduce the tension on the specimen when it is dragged out and reduce the difficulty and complications of the surgery.

Reviewer #3:

1. Was the follow-up period sufficient to assess the long-term outcomes of R-NOSES I-F, such as local recurrence and distant metastasis rates?

Response: Thank you for your comment. We believe that, theoretically, the R-NOSES I-F is an ex vivo tumor dissection method that minimizes the risk of tumor spread. Although 78% of the cases we included were followed up for more than 2 years, our follow-up time was not long enough, and our evidences were not substantial to show a difference between this new and the traditional procedures in terms of tumor treatment completeness and postoperative recurrence rate. Our team will follow up further and publish the results of the long-term efficacy comparisons.

2. Did the authors discuss any potential complications or disadvantages associated with R-NOSES I-F that were not mentioned in the results?

Response: Thank you for your comment. Here, we discuss the potential complications and disadvantages of R-NOSES I-F.

Combined with surgical experience, we believe that R-NOSES I-F has the following limitations and disadvantages.

(1) R-NOSES I-F uses the principle of intussusception to ectopically dislodge the intestinal segment to be resected outside the body; this requires upward high freeing of the descending colon during the surgical procedures, which increases the difficulty of the surgery. Therefore, we selected patients with small tumors and low BMI for this procedure to reduce the risk of postoperative complications after R-NOSES I-F to a certain extent. (2) Oval forceps was placed through the protective sleeve at the pre-excision site of the bowel lumen and fixed with sutures to the bowel lumen. This single-point suture fixation method places the intestinal wall under greater tension and carries the risk of intestinal tearing. Although no such complications occurred, considering the disadvantages mentioned above, we propose to improve this method as follows: a metal rod with a large head end and a small tail end (similar to a mushroom shape) is used instead of oval forceps, and then the neck of the metal rod and the colonic intestinal wall are tied under the robotic view; the specimen is dragged out, which can greatly reduce the tension on the specimen when it is dragged out, reducing the difficulty and complications of this surgery. (3) Since 2015, our team has successively performed more than 200 colorectal NOSES procedures (including NOSES I, IV, V, and VIII) with robotic assistance, which is one of the reasons for the reduction in complications after R-NOSES I-F.

3. How reliable and valid were the outcome measures used to assess pain (visual analog score), postoperative anal venting time, postoperative complications, inflammatory response, and functional outcomes?

Response: Thank you for your comment. In our study, we assessed postoperative pain using the VAS, postoperative anal function using the LARS rating scale and the Wexner incontinence score, and postoperative urinary function using the IPSS. The postoperative inflammatory response

was assessed by global white blood cell and neutrophil count levels on postoperative days 1, 3, and 5, and by body temperature from postoperative days 1 to 5. The measurements we used are commonly used to assess postoperative indicators of rectal cancer, with good reliability and validity.

This is found on page 5 as follows:

“Postoperative pain was assessed using a visual analog scale (VAS) calibrated from 0 to 10, with 0 indicating no pain and 10 representing the most intense pain imaginable. Pain scores were recorded on postoperative days 1, 3, and 5. The postoperative inflammatory response was evaluated using global white blood cell and neutrophil counts (on postoperative days 1, 3, and 5), and body temperature (from postoperative days 1 to 5).”

4. Were there any confounding factors or variables that were not adequately addressed in the analysis?

Response: Thank you for your comment. A few patients included in this study had comorbidities, such as hypertension, diabetes, anemia, or hypoproteinemia; however, surgery was performed only after stabilizing the underlying condition. Although we assumed that it could influence the postoperative prognosis, we do not have sufficient evidence to support this. Our team will address this question further as the R-NOSES I-F is conducted, and we expect to provide more well-documented comparative results.

We believe that our manuscript has considerably improved after being revised per the comments and suggestions of the reviewers. A few modifications are marked in red in the revised manuscript, and they do not influence the content nor framework. We earnestly appreciate the work of the editors/reviewers and hope that the revised version of our manuscript is now suitable for publication in World Journal of Gastrointestinal Surgery. Thank you for your comments and suggestions.