

Dear Prof. Ma,

Thank you very much for your decision letter and the suggestions on our manuscript (No: 33431) entitled “Simple instruments facilitating achievement of transanal total mesorectal excision in male patients”. We also thank the reviewers for their constructive and positive comments and suggestions. Accordingly, we have revised the manuscript, and our point-by-point responses to the comments are listed below this letter. In addition, some quantitative data that followed a non-normal distribution are presented as median (range) and were compared by Mann-Whitney U test according to the advice from Xin-Jun Yang, a professor of statistics. Please note that all changes are highlighted in **RED**.

We hope that the revision is acceptable for publication in your journal and look forward to hearing from you soon.

With best regards,

Chang Xu

First of all, we would like to express our sincere gratitude to the reviewers for their constructive and positive comments.

### **Replies to Reviewer 00070191**

Reviewer 00070191: In this retrospective study the influence of a modified approach with transanal total mesorectal excision (taTME) using simple instruments in male patients with low rectal cancer have been evaluated. The sphincter preservation has been provided in all cases. The operative time in taTME group (group B) was found to be significantly shorter than in patients who underwent to a classical resection (group A). Compared with group A, more complete distal mesorectum and total mesorectum were achieved in group B. Moreover a lower local recurrence rate and higher disease-free survival have been observed in group B when compared to group A. However these differences were not statistically significant. This well-written paper of a promising unique surgical approach. In this study a comprehensive pathological evaluation has been performed. However I did not notice any name of a pathologist in the study. This should be corrected because without a pathologist the reliability of the data presented here will be argumentative

**Response:** Thank you for your critical comments. Several pathologists always supported us loyally. We have included one of them as an author and acknowledged the other pathologists in the article.

## Replies to Reviewer 00722239

Reviewer 00722239: The authors have developed a unique surgical method for transanal total mesorectal excision (taTME) using simple instruments. The reviewer consider that their procedure is potentially good and the manuscript is well written. I have some minor comments. 1. What is the selection criteria of the patients for Group A and Group B? 2. Group B has a higher frequency of laparoscopy. How about the impact of laparoscopic procedure on surgery time? 3. Is there a bias in the era of surgery between Group B and Group A? 4. Is there difference between the two groups due to the bias of the operators?

**Response:** Thank you for your critical comments.

1. In this retrospective study, the clinical characteristics of the patients were similar for Groups A and B. The selection criteria were 1) tumor margin located  $\leq 5$  cm from the anal verge; 2) palpable resectable primary tumor detectable by digital examination, and no tumor invasion in the external sphincter, levator ani, and puborectalis muscles by magnetic resonance imaging (MRI); 3) no distant metastasis found before operation; 4) refusal to undergo abdominoperineal resection of the rectal carcinoma and strong desire for sphincter preservation; and 5) huge tumor volume (tumor diameter  $\geq 40$  mm). The only difference between group A and group B was the operational approach.

2. In this study, group B had a higher frequency of laparoscopy compared with group A, but this difference was not statistically significant. In addition, more patients received ostomy and neoadjuvant radiotherapy in group B. The procedure of ostomy and the increased difficulties derived from neoadjuvant radiotherapy would also prolong the operation time. Previous studies showed that laparoscopic proctectomy had a longer operation time than open proctectomy [1, 2]. However, the operation time in group B was still significantly shorter than that in group A. Therefore, a higher frequency of laparoscopy in group B would not affect the finding of a shorter operation time in group B.

[1] van der Pas MH, Haglind E, Cuesta MA, et al. Laparoscopic versus open surgery for rectal cancer (COLOR II): short-term outcomes of a randomised, phase 3 trial [J]. *Lancet Oncology*, 2013, 14(3):210-8.

[2] Silva-Velazco J, Dietz DW, Stocchi L, et al. Considering Value in Rectal Cancer Surgery: An Analysis of Costs and Outcomes Based on the Open, Laparoscopic, and Robotic Approach for Proctectomy [J]. *Annals of Surgery*, 2017, 265(5): 960-8.

3. Although the patients were enrolled during a relatively long era, there were three surgeons in this study, and some of the patients receiving different operational approaches could be distributed at adjacent or even identical time points. Thus, bias caused by the era of surgery would be partly offset.

4. The difference in surgeons between groups had no statistical significance by chi-square test ( $P=0.815$ ). We have included this information in Table 1.

## Replies to Reviewer 03476292

Reviewer 03476292: This is a very interesting study about a surgical technique that although described several decades ago, is only now being widely adopted by colorectal surgeons around the world. I find the result very interesting and although there are several biases between the groups, the authors demonstrate clearly that the technique is not only feasible but that with enough creativity there is no need for high cost equipment to ensure good surgical results. The only comments I have are related to several factors missing from the analysis, such as Length of stay and wound infection rates (that is surprisingly not described) and I would also add a Clavien Dindo analysis between the two groups. Nonetheless, I congratulate the authors for a very well written article and a well executed study.

**Response:** Thank you for your positive comments and kind suggestions. We have added the following data in the Tables 1, 2 and 3, respectively.

### Clinical characteristics and complications

Variable	Group (n=41)	A Group (n=74)	B	P value
ASA score				
1	6(14.6%)	8(10.8%)		0.787
2	24(58.5%)	43(58.1%)		
3	11(26.8%)	23(31.1%)		
Ostomy	18 (43.9%)	72 (97.3%)		0.000
Operators				0.815
A	26(63.4%)	51(68.9%)		
B	9(22.0%)	13(17.6%)		
C	6(14.6%)	10(13.5%)		
Blood loss (mL)	80(20-500)	60(20-300)		0.184
Hospital stays after operation	8(7-23)	8(6-19)		0.341
Wound infection	3 (7.3%)	4(5.4%)		0.681
Urinary retention	3(7.3%)	5 (6.8%)		0.910
Clavien-Dindo classification				0.850
I	5 (12.2%)	7 (9.5%)		
II	3 (7.3%)	10 (13.5%)		
III	2 (4.9%)	0		

Group A: a classical approach; Group B: a modified approach with retrograde transanal TME

### **Replies to Reviewer 02445477**

Reviewer 02445477: A good concise manuscript with new insight.

**Response:** Thank you for your positive comment.

### **Replies to Reviewer 03004220**

Reviewer 03004220: Nice paper, although it is retrospective. Abstract and core tips should include some details about the "simple" instruments. Local recurrence rates should be reported for both groups.

**Response:** Thank you for your critical comments. We have described more details in the Abstract section and in the main text. Local recurrence was found in 10 cases (8.7%, 6 in group A and 4 in group B). We have included these data in the revised manuscript.