

Response to the reviewers

Dear reviewer:

I am very grateful for your review of our manuscript. According to your comments, we have amended the relevant part in manuscript. Some of your questions were answered below.

Reviewer1.

Question1: The study mentioned above should be referred in the introduction. The advantage of R-PPG compared with laparoscopic PPG can be discussed.

Answer1: Based on your comment, we have added the following two references:

(1) Guerrini GP, Esposito G, Serra V, Guidetti C, Olivieri T, Catellani B, Assirati G, Ballarin R, Di Sandro S, Magistri P, Di Benedetto F. Robotic versus laparoscopic gastrectomy for gastric cancer: the largest meta-analysis. *Int J Surg*. <https://doi.org/10.1016/j.ijvsu.2020.07.053>.

(2) Han DS, Suh YS, Ahn HS, Kong SH, Lee HJ, Kim WH, Yang HK. Comparison of Surgical Outcomes of Robot-Assisted and Laparoscopy-Assisted Pylorus-Preserving Gastrectomy for Gastric Cancer: A Propensity Score Matching Analysis. *Ann Surg Oncol* 2015;22:2323-2328 [PMID:25361887 DOI 10.1245/s10434-014-4204-6]

We have added the following text to the Introduction:

[A meta-analysis evaluated the advantages of robotic gastrectomy (RG) vs laparoscopic gastrectomy (LG) for gastric cancer. The results showed that the operative time of RG was significantly shorter and the cost was relatively higher, but RG had advantages in increasing the number of retrieved lymph nodes and controlling intraoperative blood loss. Although there was no significant difference in overall complications, complications with Clavien–Dindo classification greater than grade 3 in RG were significantly lower than those in LG. Distal and proximal resection margin distance, conversion rate to open surgery, mortality rate, and recurrence rate were not significantly different between them. Han *et al* from Korea first compared perioperative efficacy and oncologic safety between robot-assisted and laparoscopy-assisted pylorus-preserving gastrectomy in the treatment of middle-third early gastric cancer. The operative time of the robot-assisted pylorus-preserving gastrectomy was longer, but there was no significant difference in complications and the number of examined lymph nodes].

Question2: Inclusion criteria of the cases were not documented in the method section.

Answer2: The inclusion criteria were as follows: 1) ECOG score ≤ 2 points; 2) histologically confirmed adenocarcinoma (papillary adenocarcinoma, tubular adenocarcinoma, mucinous adenocarcinoma, signet ring cell carcinoma, poorly differentiated adenocarcinoma) with gastroscopic pathological biopsy before operation; 3) no group 1 and 5 lymph node metastasis on abdominal CT; 4) a distance of ≥ 4 cm from the distal end of the tumor to the pylorus on gastroscopy, abdominal CT, and upper gastrointestinal angiography; 5) clinical stage of cT1a-1bN0M0 on transabdominal-enhanced CT (AJCC 8th Edition); and 6) confirmation that the depth of tumor infiltration was limited to the mucosa or submucosa on postoperative pathology.

Question3: Two patients with advanced gastric cancer were treated with PPG. PPG is recommended for the treatment of early gastric cancer according to some guidelines. This case series should include the patients with early gastric cancer treated with R-PPG, for the analysis of outcome and morbidity.

Answer3:

No.	Sex	Year	Body mass index (kg/m ²)	Operative time (min)	Tumor size (cm)	pT	pN	Histology	Number of resected lymph nodes	Number of metastatic lymph nodes
1*	M	70	24.20	300	7	3	2	Poorly	29	3
2	M	62	21.70	390	2	1b	0	Well	19	0
3	F	64	20.70	330	3	1a	0	Medium	32	0
4	M	56	27.10	315	3	1a	0	Signet ring cell	8	0
5*	M	65	29.50	325	4	4a	3	Poorly	51	13
6	F	72	26.20	410	1.5	1a	0	Well	9	0
7	M	70	26.42	330	2.5	1a	0	Poorly	21	0
8*	M	79	28.73	240	3	2	0	Poorly	12	0
9	M	52	28.02	270	3	1a	0	Medium	13	0
10	M	66	23.95	300	2	1a	0	Well	11	0
11	F	66	25.08	300	4	1b	2	Poorly	36	3

* These cases do not meet the inclusion criteria and were excluded from the statistics.

The general clinical data of 11 patients are shown in the Table. Postoperative pathological

diagnosis results of patients 1, 5, and 8 indicated advanced gastric cancer, as the depth of tumor infiltration exceeded the submucosa, and the inclusion criteria of this study were not met. Therefore, eight patients were finally included in this study.

Question4: Please include the limitations of the study.

Answer4: We have added the limitations as follows:

The major limitation of this single center is the retrospective design and the small sample size. This study aimed to highlight the surgical process, technical details, technical points, and precautions of RAPPG and retrospectively analyze the short-term prognosis of early gastric cancer cases. More cases should be accumulated, long-term follow-up should be conducted, and data should be compared with data for LAPPG to gather more data for RAPPG in the treatment of patients with early gastric cancer.

Overall, these study results are initial, and on establishing a standard surgical treatment, large-sample, multi-center, and prospective clinical trial should be conducted.

Reviewer2.

Question: the manuscript is too long and involves multiple issues in a single research paper. Thus the reader losses the focus. I suggest to the authors : Either it has to be a comparative analysis which would involve other minimal invasive procedure .This would bring a power statement to the study. Or it could be the initial experience which should include the detailed oncological outcome. Dissection of L/N like station 9,10,11,14 and histological analysis with TNM staging and certainly a good follow up. Or ,it can be a paper in a section like that of ‘ How I Do it’ .This would be mainly focused on the technique component with good photographs and illustrations wherever indicated.

Answer: We greatly appreciate your review of our manuscript. We have carefully revised the manuscript in accordance with your comments. We mainly focused on the surgical technology part and analyzed the clinical data of only eight patients with early gastric cancer. Because this was a radical operation for early gastric cancer, the scope of lymph node dissection was D1 + 8a, 9, and 11p groups, and no lymph node dissection was performed for groups 10 and 14. In one case, the depth of infiltration was until the submucosa, with three lymph node metastases. The pathological

diagnosis data of this patient have been added to the manuscript. We also reselected clearer and representative pictures of operation, so that the pictures are more conducive to the understanding of surgery.

Please do not hesitate to contact us if there are any further questions. Thanks again to the reviewers and editors for your hard work! Best wishes!

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