Peer Review File

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Reviewer A

The authors compared short-term outcomes between two different types of mediatinoscopic esophagectomy. This study was retrospective, and the number of cases was small. There was no difference in the outcomes except in the length of the mobilized esophagus. The length might be influenced by a learning curve. Unfortunately, I cannot find any benefit for patients by the modified procedures.

Reply:
Your suggestions are very enlightening, and we are aware that the research we are currently engaged in is mainly focused on technical aspects and has not yet delved into research related to patient benefits. Also, due to the limited size of our research center, the number of cases included is relatively small, which to some extent affects the adequacy of the follow-up period. However, despite these limitations, we strongly believe that this study on technological innovations is significantly innovative in terms of technological improvements and therefore has great potential for replication. We believe that the results of this study deserve to be published in your journal, with a view to sharing our findings more widely and advancing the field.

Reviewer B

The authors present a single centre retrospective review of two different variations of an advanced transhiatal esophagectomy. The first employs a multiport laparoscopic with a single rigid scope through the neck. The second employs single incision supraumbilically and a flexible endoscope in the neck. The group shows a low complication rate and excellent operative times. They conclude that this is a safe and feasible operation.

The technique being described is quite novel and as such warrants publication to disseminate this knowledge. However, the quality of the results could use improvement which can help readers decide if this applies to their patient population and if it is equivocal to their oncologic outcomes.
Comment 1:

1) In the baseline characteristics, the number of patients who received neoadjuvant chemotherapy, neoadjuvant radiation or both should be included. The median BMI of each group should be included.
Reply 1: Thanks for your advice. We have included those data in Table 1.
Changes in text: Page 16, Line 418.

Comment 2:
2) The final pathological TNM stage should be provided for each group. The proportion of R0, R1 and R2 margins should be reported.
Reply 2: Thanks for your advice. We have included those data in Table 1.
Changes in text: Page 16, Line 418.

Comment 3:
3) The proportion of adenocarcinoma, squamous cell carcinoma, etc. should be broken down for each group.
Reply 3: Thanks for your advice. We have included those data in Table 1.
Changes in text: Page 16, Line 418.

Comment 4:
4) The median length of stay and 30 day complications should be provided for each group.
Reply 4: Thanks for your advice. We have included those data in Table 1.
Changes in text: Page 16, Line 418.

Comment 5:
5) There should be a description of how anastomotic leaks were tested for (i.e. swallow study, endoscopy or computer tomography?)
Reply 5: We have added information on how to detect anastomotic leakage detection in the appropriate places in the article.
Changes in the text: Page 5, Line 119-122.

Comment 6:
The study would be strengthened if a cohort of patients who underwent traditional minimally invasive esophagectomies via Ivor-Lewis or McKeown were available for comparison.
Reply 6: Thank you very much for your valuable suggestions. In our present study, we focused on the innovation of inflatable mediastinoscopic technique and did not aim to analyze it in comparison with conventional thoracoscopic surgery. We are committed

to exploring the innovations of this technique with the aim of contributing to the development of related fields. As for the comparison between transcervical inflatable mediastinoscopic esophagectomy (TIME) and thoracoscopic esophagectomy (TE) for the treatment of localized early to mid-stage esophageal squamous cell carcinoma, we have published a related article (DOI: 10.1002/jso.26798), and found that the number of lymph nodes harvested during surgery and the RFS rates of two groups did not have significant differences.

Reviewer C

Authors reported their work named "A preliminary study of modified inflatable mediastinoscopic and single-incision plus one-port laparoscopic esophagectomy" and concluded "Inflatable mediastinoscopy combined with single-incision plus one-port laparoscopic esophagectomy is a safe and effective surgical procedure. The use of a 5-mm flexible endoscope, ultra-long five-leaf forceps, and LigaSure Maryland forceps facilitates esophageal mobilization and lymph node dissection through a single cervical incision.". I have the following comments:
Comment 1:
- Please specify in your title that it is "randomized clinical trial".
Reply 1: Thank you for your suggestion, but our current study was not a randomized clinical trial.

Comment 2:
- Please specify the randomization method eg random number generator.
Reply 2: Thank you for your suggestion, but our current study was not a randomized clinical trial.

Comment 3:
- Optional request: Please try to add a video of the cervical and abdominal procedures with voiceover for your approach.
- Language revision is essential.
Reply 3: Your suggestions are invaluable. We have already carried out an exhaustive grammatical check and optimization of the article, and after many iterations of careful proofreading, it is indeed difficult for us to find any room for further improvement. However, in view of your profound knowledge of the language, we would be grateful if you could point out to us any shortcomings in the article that still need to be improved. We will certainly accept your valuable comments and take them into consideration, with a view to making the article even better.

Comment 4:

- Line 387 and 391: Please write mean and standard deviation instead of "퐁" in all tables footnote.

Reply 4: Replaced.

Changes in the text: Page 17-21, Line 419-441.

Comment 5:

- Please try to comment on the recently published relevant meta-analysis in your discussion (PMID: 36820939).

Reply 5: Thanks for your kindly advise. We have added some comment on the recently published relevant meta-analysis in the discussion section.

Changes in the text: Page 9, Line 232-235

Comment 6:

- Please try to add COPD or FEV1 to Table 1, if possible.

Reply 6: Thank you very much for your suggestion, the core of our study is to explore the innovation of the technology in depth, therefore, the inclusion of COPD and FEV1 in the statistics is not a necessary part of the study. We will focus more on researching and analyzing the technological innovations themselves in order to achieve more valuable results.

Comment 7:

- Please specify the variables that randomization was done based on.

Reply 7: Thank you for your suggestion, but our current study was not a randomized clinical trial.

Comment 8:

- Table 2 and 3: Please add a column for the unadjusted odds ratio for the reported variables.

Reply 8: Thank you for your suggestion, we have added a column for unadjusted odds ration with its 95% confidence interval in Table 2 and 3.

Changes in the text: Page 20-21, Line 425-441.

Comment 9:

- Table 2: Please try to add lymph node ratio (LNR) defined as positive LN/total harvested LN x100.

Reply 9: Thank you for your suggestion, we have added a row for LNR in Table 2.
Changes in the text: Page 20, Line 427.

Comment 10:
- Please specify if there is any conversion to open approach in your cases
Reply 10: In the results, we have mentioned that there are no cases of conversion to open thoracotomy among all patients (Page 8, Line 205-206).

Comment 11:
- Please try to add a reference to this sentence "esophagectomy. Based on our experience, the success rate using the traditional (primary modification) method is approximately 40% (P0)" and specify the meaning of P0 and P1 or just delete such abbreviations.
Reply 11: Your suggestions are invaluable. To avoid confusion, we have deleted such abbreviations. In addition, we reached this conclusion mainly based on the long-term clinical practice experience of our center, which has provided solid support for our study. However, as we focus more on the exploration at the practical level, the support in terms of literature is indeed relatively insufficient.
Changes in the text: Page 7, Line 179-180.

Reviewer D

Congratulations for showing that inflatable mediastinoscopy is feasible and safe for esophageal mobilization and mediastinal dissection during trans hiatal esophagectomy.
A few comments and observations:
Comment 1:
In the highlight box, the authors suggested they are introducing a new method for esophagectomy, I would rather call it a modification of a previously described technique.
Reply 1: Thanks for your advice. We have replaced the inappropriate description.
Changes in the text: Page 2, Line 27.

Comment 2:
The authors briefly acknowledged within the limitations of the study; the risk of selection bias could be present. It appears that way for 90% of the patients were stages I and II, 70% were stage I. 90 % of the patients ASA was 1 and 2.
Reply 2: Thanks for your suggestions. We have added the detail of the bias in the discussion section.

Changes in the text: Page 11, Line 293-294.

Comment 3:
It caught my attention that despite the improvement in exposure and mobilization with the modified technique, the number of harvested lymph nodes and operative times were similar between the two groups. How would the authors explain this?
Reply 3: In the present study, we placed special emphasis on performing as complete a freeing of the esophagus as possible and insisted on a highly standardized and regulated approach to lymph node clearance associated with esophageal cancer during surgery in both the experimental and control groups. Therefore, as you can see, both groups presented similar results in terms of the number of lymph nodes harvested as well as the duration of surgery.

Comment 4:
Injury of the recurrent laryngeal nerve is significant; I think the authors should elaborate on this issue. It is well known the clinical significance of it. And most importantly, given the recent reports on refinement of robotic node dissection techniques around the RLNs and with reported lower injury rates.
Reply 4: As we have already pointed out in the article: Among the patients, four in Group A and two in Group B experienced postoperative recurrent laryngeal nerve paralysis. Thank you for your suggestion. We will endeavor to learn and study the advances in robotic dissection of the nodes around the recurrent laryngeal nerve in our subsequent work. In addition, we will actively pursue subsequent improvements with the aim of minimizing or avoiding damage to the recurrent laryngeal nerve in this procedure.

Reviewer E

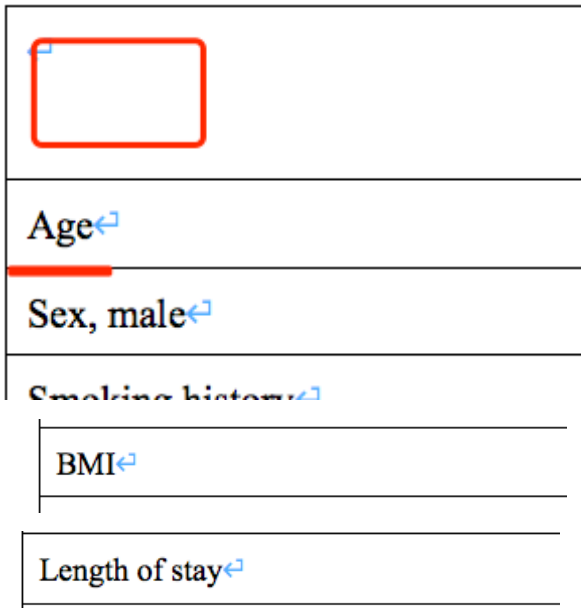
1. We cannot find these two keywords in the abstract or main text. Please revise.

57 **Keywords**: esophageal cancer; minimally invasive esophagectomy; inflatable
58 mediastinoscopic surgery; esophagectomy without thoracotomy

Reply 6: We have revised the "Keywords". The new version is: esophageal cancer; minimally invasive esophagectomy; inflatable mediastinoscopic esophagectomy

2. Table 1

a. Please provide a table header.
b. Please provide a unit for 'Age', 'BMI' and 'Length of stay'.



Reply 10: Thanks for your comments! The table header has been provided. The units for 'Age', 'BMI' and 'Length of stay' were also added.

3. When using **abbreviations** in table/figure or table/figure description, please mention the entire expression in a footnote below the corresponding table/figure. Please check and revise.

Such as: BMI, SCC, AC (table 1); OR, CI (Tables 2, 3).

Reply 11: Correspondingly, we have added the entire expression of the abbreviations.

4. **Please give a reference for this sentence, as you mentioned "previous research".** Please note that references should be cited consecutively and consistently according to the order in which they first appear in the text.

In our previous research, we made a primary modification, mainly focusing on the cervical procedures. Building on these refinements, we are currently concentrating on optimizing the abdominal steps to further reduce patient trauma.

Reply 12: Out previous work was published in J Surg Oncol (2022;125:839-46), the citation was added.