

Peer Reviewer File

Article information: <http://dx.doi.org/10.21037/gc-20-536>.

Reviewer A

The authors retrospectively reviewed patients with mediastinal tumors who underwent minimally invasive surgery and evaluated the feasibility of multiportal video-assisted thoracoscopic surgery (VATS), uniportal VATS, and robot-assisted thoracoscopic surgery (RATS) using propensity score-matched (PSM) comparative analysis. In general, although it is a retrospective study this paper provides interesting findings; however, there are several suggestions and questions for the authors.

Response:

We thank you for the appreciation of our original submission and for allowing us to revise the manuscript.

Major Comment 1: Page 5, Line 19-20. The author should mention the patient's position and the incision site for RATS. Yoshino et al (J Thorac Cardiovasc Surg. 2001;122(4):783-5.) performed RATS in a hemi-lateral position, a mini thoracotomy, and two ports were placed in the fifth and sixth intercostal spaces, respectively. Generally, the patient's position and incisions site for RATS are different from those of VATS. Was RATS in this paper performed in the same way as multiportal VATS, a typical 3-port approach?

Reply 1: Thanks for making a very good point here and the suggestion is valuable to our study. We have modified our text in the method section as advised (see Page 5, Line 21 to Page 6-Line 5).

Changes in the text: Page 5, Line 21 to Page 6-Line 5.

Major Comment 2: The authors compared various clinical factors for the three approaches of minimally invasive surgery, but did not comment on postoperative pain. The number of incisions and whether robotic surgery contributed greatly to the patient's postoperative pain, therefore the author should compare postoperative pain among these three groups.

Reply 2: We thank the reviewer for this insightful comment. Based on your suggestions, we have added some data in Table-2 and Table-3 to compare the postoperative pain among 3 groups. We also added the description of postoperative pain evaluation and analgesia in the method section (see Page 6, Line7 to 10).

Changes in the text: Page 6, Line7 to 10, Page 8, Line 11 to 12, Page 9 Line 12, Page 10 Line 13, Page 12 Line 7, Table-2, Table-3.

Major Comment 3: What were the reasons for unplanned thoracotomy in the respective cases? In the discussion section, the authors emphasized the safety of RATS because of its lower unplanned thoracotomy incidence rate. However, we usually perform unplanned thoracotomy for various reasons such as bleeding, adhesion, anatomical features, unexpected tumor invasion of the surrounding structures, and so on. To clarify the safety of RATS, the authors should note the reasons for performing unplanned thoracotomy in each case presented in the manuscript.

Reply 3: Thanks for your professional review work on our article. We have added the reasons for performing unplanned thoracotomy in Table-2 and Table-3.

Changes in the text: Table-2, Table-3.

Minor Comment 1: Title. “Mediastinal gland lesions” seems strange.

Reply 4: Thanks for your suggestion. We have re-phrased the words as “mediastinal lesions” based on your suggestion (see Page 1, Line 3).

Changes in the text: Page 1, Line 3

Minor Comment 2: Page 4, Line 20. “caliper setting of 0.02.” Is this number right?

Reply 5: Thank you for your careful review. We created a balanced cohort using an optimized performance-matching algorithm with a caliper setting of 0.02 in our study. Although the smaller the caliper setting was, the more accurate the matching was, if we chose a smaller caliper value than 0.02, only a few pairs could be successfully matched. Thus, we performed the PSM with a caliper setting of 0.02 and the baseline characteristics of the study population after PSM were homogeneous [supplemental table 2].

Changes in the text: N/A

Minor Comment 3: Page 7, Line 8. Did the analyses of the operation time and amount of bleeding in each group include the cases of unplanned thoracotomy? If so, it would make the comparison of results among each procedure confusing because it is natural that an additional thoracotomy procedure would cause the operation time to be lengthened and increase bleeding amount. The reviewer thinks that the unplanned thoracotomy cases should be excluded from analysis of these two factors.

Reply 6: We feel great thanks for your professional review work on our article. This concern is of great importance. We have modified our text in the results section as advised (see Page 7, Line 17 to 20, Page 9, Line 8 to 10, Table 2, Table 3, Figure 2A,

Figure 2B).

Changes in the text: Page 7, Line 17 to 20, Page 9, Line 8 to 10, Table 2, Table 3, Figure 2A, Figure 2B.

Minor Comment 4: Page 8, Line 22. the number of cases with postoperative complications was four in the VATS group and three in the RATS group, respectively. This result did not show that RATS has the potential to be protective against adverse events.

Reply 7: We feel great thanks for your professional review work on our article. Based on the definition of adverse events and logistic regression analysis in our study, the results showed that comparing with VATS, the odd ratio of RATS was 0.456 and the 95%CI was 0.128 to 1.626 which was not statistically significant. Although the incidence rate of adverse events was not significantly different between the VATS group and the VATS group, it indicated that RATS didn't increase the incidence rate of adverse events comparing with VATS which was considered as a standard approach in minimally invasive mediastinal lesions resection. Besides, our results also showed that RATS had less unplanned thoracotomy cases and postoperative pain which revealed that RATS was safe and feasible with potential advantages in recovery. We have modified this sentence in the results section as advised and shown the complete result in the supplemental Table 3. (see Page 9, Line 14-16, supplemental Table 3)

Changes in the text: Page 9, Line 14-16, supplemental Table 3.

Minor Comment 5: Page 9, Line 8-10. The reviewer could not find this result. Please indicate clearly.

Reply 8: Thanks for your question. We are sorry for making the reviewer feel confused. In our study, after PSM, we also performed logistic regression in each matched cohort to identify risk factors for adverse outcomes. However, the results showed that comparing with tri-VATS, the odd ratio of uni-VATS was 0.673 and the 95%CI was 0.194 to 2.333 ($p=0.533$) which was not statistically significant. This result did not show that uni-VATS was protective against adverse events. So, with the limitation of words, we didn't use a table summarized this result but only mentioned the statistical result in our manuscript. We have modified our text as advised (see Page 10, Line 2, supplemental Table 4).

Changes in the text: Page 10, Line 2, supplemental Table 4.

Minor Comment 6: Page 12, Line 1-2. "Deng et al. indicated that uniportal VATS for resection of mediastinal disease is technically safe and feasible with multiportal VATS." It is not clear what this passage means.

Reply 9: Thanks for your suggestion. We have re-phrased this sentence based on your suggestion (see Page 12, Line 17-19).

Changes in the text: Page 12, Line 17-19.

REVIEWER B

The authors reported their experience on different minimally invasive approaches for mediastinal gland resections.

They compared 3 surgical approaches: uniportal VATS, triportal VATS and robotic procedures.

Response:

We feel great thanks for your professional review work on our article. According to your comments, we have revised the manuscript.

Comment 1: some minor spelling English mistakes should be corrected.

Reply 1: Thanks for your suggestions. We feel sorry for our poor writings, and we have invited a native English speaker to edit our submission. The editing certificate was also attached. We sincerely hope the revised manuscript could be acceptable for you.

Changes in the text:



Editing Certificate

This document certifies that the manuscript

Uniportal video-assisted thoracoscopic surgery and robot-assisted thoracoscopic surgery are feasible approaches with potential advantages in minimally invasive mediastinal lesions resection

prepared by the authors

Liping Zeng, Weidong Wang, Jia Han, Linhai Zhu, Jiangang Zhao, Zhengliang Tu

was edited for proper English language, grammar, punctuation, spelling, and overall style by one or more of the highly qualified native English speaking editors at AJE.

This certificate was issued on **September 9, 2020** and may be verified on the [AJE website](https://www.aje.com) using the verification code **B11F-12A5-9772-1B35-4FD6**.



Neither the research content nor the authors' intentions were altered in any way during the editing process. Documents receiving this certification should be English-ready for publication; however, the author has the ability to accept or reject our suggestions and changes. To verify the final AJE edited version, please visit our verification page at [aje.com/certificate](https://www.aje.com/certificate). If you have any questions or concerns about this edited document, please contact AJE at support@aje.com.

AJE provides a range of editing, translation, and manuscript services for researchers and publishers around the world. For more information about our company, services, and partner discounts, please visit [aje.com](https://www.aje.com).

Comment 2: the authors should clearly stated whether this study was retrospective or prospective.

Reply 2: Thanks for your question. Our study was a retrospective study. We have modified our text as advised (see Page 4, Line 4).

Changes in the text: Page 4, Line 4.

Comment 3: The authors should give some take home messages for the readers. When did they advise to choose uni-VATS or tri-VATS or RATS? Are there any variables that the surgeons should consider for mediastinal gland resections?

Reply 3: Thanks for making a very good point here. Your question is important. For patients whose tumors are located in the anterior, middle, or posterior mediastinum, if uniport VATS was technically feasible for surgeons, this approach should be preferentially considered. Because this approach has fewer scars, further improvements in cosmesis, better postoperative recovery without increasing the operation risk and expense. However, for patients whose lesions located in the superior mediastinum or other locations where the operation space was narrow as well as having pleural adhesions or unexpected tumor invasion of the surrounding structures, RATS should be recommended if technically possible and economically affordable as RATS has an optimized visual field, and the da-Vinci system could

enable surgeons to carry out more flexible and delicate actions which can improve the safety of the operations and avoid unplanned thoracotomy. We have modified our text as advised (see Page 13, Line 14 to Page 14, Line 1).

Changes in the text: Page 13, Line 14 to Page 14, Line 1.