Peer Review File

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Reviewer A

I would like to thank the authors for presenting an interesting surgery with excellent technique. I believe this paper is clearly written and is easy to understand. The attached video is of high quality and is adequately edited. However, I find some pitfalls which require improvements.

Major issues:

The text is extremely detailed. I believe that this report is interesting for thoracic surgeons familiar with standard VATS lobectomies. I do not know if there is a need to describe the maneuver of pulmonary ligament transection for 65 words. Please consider shortening the manuscript. Less is more at this point.

Reply 1: The text describing the maneuver of pulmonary ligament transaction" was shortened.

Changed in text: We have shortened our text as advised (see Page 2, line 34-36).

- Please specify whether you obtained R0 resection.

Reply 2: We added the content specify the surgical margin. R0 resection was achieved in this patient (see Page 5, line 18).

- Please specify whether you performed any intraoperative frozen section of the bronchial margin. If not, please comment on that.

Reply 3: We performed intraoperative frozen section of the bronchial margin. We added the description in the new manuscript (see Page 4, line 26-28).

- Please consider specifying the exact types of instruments, sutures, and staplers used (including trading information).

Reply 4: The "exact types of instruments, sutures, and staplers used" were described in Page 2, line 23-24, Page 4, line 1, line 8-9, line 14, line 17-18, and line 32.

- Authors mention that: “revealed a neoplasm at the orifice of the right bronchus intermedius with complete obstruction of the orifice, which pathological biopsy confirmed to be squamous cell carcinoma.” Please state at this point why simple lower lobectomy was not possible at this point and sleeve bilobectomy was the only option.

Reply 5: Simple lower lobectomy at this point was not possible because distal of the right main bronchus was involved by the tumor and R0 resection cannot be achieved with only simple lower lobectomy performed.

Minor issues:

- Soft tissue retractor is present protecting the port in the video. Please specify what kind of device was used.

Reply 6: We added text specifying the soft tissue retractor in Page 2, line 21-22.

- There is bronchoscopic report in the abstract but there is no in the main text. Please correct that.

Reply 7: We added the bronchoscopic report in the main text in Page 2, line 5-8.

-Please correct:

"The right lower lung (lobe?) was pulled anteriorly to expose the posterior mediastinum".

Reply 8：We corrected it（Page 3, line 1）.

Reviewer B

Manuscript is concise and to the point with well described steps, illustrations and video. Overall very nice surgical technique but would be more educational to other surgeons if there is an outside view of the port placements with a schematic diagram of the outside view of the sewing technique especially steps taken to prevent entanglement of the continuous sutures.

Reply 9: We have added a figure depicting the outside view of the port placements named Figure 1a (Page 2, line 21)

The schematic diagram of the sleeve lobectomy steps is always our interesting point,

we will learn how to do it well in the follow-up work.

Reviewer C

With the development of thoracoscopy technology and the invention of new surgical instruments, the surgical indications of thoracoscopy are constantly expanding. Thoracoscopic sleeve resection is extremely difficult in thoracic surgery. In this study, the surgeon challenged the right middle and lower lobe sleeve resection, which is very rare and requires skills. During the operation, the surgeon showed clearance in thinking, and in anatomy. The description in the article is very detailed. The combination of the article and the video can bring demonstration effects to beginners. Of course, there are also some points need modified:

1) Lymph node dissection, rough movements, and lymph node damage. Of course, for this patient, there will be no impact, and the postoperative lymph node pathology is negative. In the subsequent surgery, the movements should be gentle, and the lymph nodes should be removed as much as possible without grasping in one piece to reduce the spread of tumors.

Reply 10: "Lymph node damage" in this surgery was a serious problem indeed. In the subsequent surgery, we will remove the lymph nodes more gently to prevent damage.

2) Before bronchial suturing, some trimming should be done, and the cutting edge of the upper lobe bronchus is not neat;

Reply 11: "the cutting edge of the upper lobe bronchus is not neat" must be a noticeable problem. We will trim the edge before suture in the following work.

3) There are multiple winding problems during the bronchial suture process. The reasons and countermeasures to avoid winding are not mentioned in the article.

Reply 12: The method how to avoid winding was described in Page 5 last 2 lines to Page 6 line 1-13.

Reviewer D

Combined with bronchoscopy and CT examination, it can be concluded that this is an intraductal lesion. It is not clear why it can only be done with sleeve lobectomy of the middle and lower lobes of the right lung. There should be more specific imaging data, such as three-dimensional imaging to show the length of the diseased trachea and the invasion of the tumor, which will more convincingly prove that it is correct to choose

the operation method.

Reply 13: We can see the distal of right main bronchus was involved by the tumor originating from the right lower lobe in the bronchoscopy and CT scan displayed in the video, so we didn't give more imaging data.

During the operation, the lymph nodes (Group 11) at the upper lobe of the right lung are larger and there are residual masses. If the lymph nodes were frozen showing positive during the operation, then sleeve resection is meaningless. So, it should be explained in the manuscript.

Reply 14: We thought that this lymph node might be Group 12 belonging to the right upper lobe, so we didn't resect it. Of course, lymph nodes found to be enlarged like this one during operation should receive a frozen section examination.

During the dissection of mediastinal lymph nodes, some lymph nodes were severely damaged.

Reply 15: "Lymph node damage" in this surgery was a serious problem indeed. In the subsequent surgery, we will remove the lymph nodes more gently to prevent damage.