Author’s response to reviews

Title: Unilateral single-port thoracoscopic surgery for bilateral pneumothorax or pulmonary bullae

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Author’s response to reviews:

Reviewer #1: The authors presented a surgical technique: the "tubeless" single-port VATS bilateral pulmonary bullae resection surgery through mediastinum. In a there are some other issues I feel should be pointed out.

1] If possible, please simplify the title that is too long and complicated;

Response: Thank you for your comment. The title has been revised to “Unilateral single-port thoracoscopic surgery for bilateral pneumothorax or pulmonary bullae”.

2] How to evaluate this surgical route and the subxiphoid operation;

Response: Thank you for your comment. Both the tubeless-SPVATS via anterior mediastinal approach and the subxiphoid operation are unilateral single-port thoracoscopic surgery, and have the defects of incomplete exploration and cardiac compression. Subxiphoid operation minimally interferes with the intercostal nerve, and the postoperative pain may be milder than this surgical method. In the subxiphoid operation, there is incomplete exploration during exploring the pulmonary dorsal in the bilateral chest. Meanwhile, because the operation path is long, the operation is difficult under a single incision. In addition, subxiphoid operation may cause cardiac compression and arrhythmia, and it will be affected by the heart's pulsation. By contrast, the tubeless-SPVATS via anterior mediastinal approach can well explore the affected side, thus ensuring the therapeutic efficacy in the affected side. Nevertheless, there is possibility of incomplete exploration of the contralateral thoracic cavity. As a result, the pneumothorax recurrence rate of the contralateral thoracic cavity may be higher compared to the chest side of incision. This potential problem can be solved by using flexible thoracoscope and flexible
instrument, which can effectively prevent the mutual interference between the thoracoscope and instrument during surgery. Meanwhile, using a flexible Olympus electronic thoracoscope can provide a wider and more comprehensive surgical view.

The above information has been added to the discussion section.

3) As the author mentioned, the contralateral thoracic is not explored fully enough in this kind of operation. Thus, the recurrence rate may be increased compared to performing thoracotomy. How can we solve this potential problem.

Response: Thank you for your comment. There is possibility of incomplete exploration of the contralateral thoracic cavity. As a result, the pneumothorax recurrence rate of the contralateral thoracic cavity may be higher compared to the chest side of incision. This potential problem can be solved by using flexible thoracoscope and flexible instrument, which can effectively prevent the mutual interference between the thoracoscope and instrument during surgery. Meanwhile, using a flexible Olympus electronic thoracoscope can provide a wider and more comprehensive surgical view.

The above information has been added to the discussion section.

4) The number of cases in the study was too small.

Response: Thank you for your comment. We have stressed out this limitation in the discussion as follows:

This study is limited by the relatively small sample size, and a prospective trial with a large sample size should be conducted to further validate the findings of this study.

Reviewer #2: The authors show their experience about Unilateral single-port thoracoscopic surgery with spontaneous breathing during general anesthesia for the treatment of simultaneous bilateral primary spontaneous pneumothorax or pulmonary bullae. This article has several important deficiencies.

First, authors do not specify which is the main objective of their manuscript. This objective should be clearly written at the beginning of the manuscript.

Response: Thank you for your comment. This study aimed to investigate if tubeless single-port video-assisted thoracic surgery (Tubeless-SPVATS) via anterior mediastinal approach can be used as an alternative surgical treatment for bilateral lung diseases, especially for concurrent or contralateral recurrence PSP. This information has been added to the introduction section.
Methodology is poorly developed and need several modifications. More details must be included in the text.

Response: Thank you for your comment. We have included more details about the surgical procedure in the methods section as following paragraphs. Please let me know if further information is needed.

The contralateral thoracic cavity was explored to locate the pulmonary bullae, and then the pulmonary bullae was excised by a rotatable endoscopic linear stapler.

According to the situation of pulmonary bullae, we decided whether or not to carry out pleural friction. If there were multiple blebs during exploration, pleural friction should be performed to improve pleural adhesions. Pleural friction was not necessary for pulmonary bullae.

Although The authors have demostranted that this technique is feasible (sample size 18 patients), they should consider other type of more interesting statistical method to demonstrate whether this technique is really necessary and whether this approach has some benefits in comparison with a conventional bilateral approach. Probably a prospective randomized controlled study could answer this question.

Response: Thank you for your comment. This tubeless-SPVATS surgical method combined the advantages of spontaneous breathing under general anesthesia, tubeless, single-port and transthoracic mediastinal approach, all of which are help to on reduce postoperative discomfort and promote recovery. The patients can eat normally at 6 hours after surgery and had no postoperative hoarseness or sore throat. Compared to the conventional bilateral approach surgery by Lang-Lazdunski et al. [27], the tubeless-SPVATS had fewer incisions, reduced surgery operative time (44.56±17.8 vs. 168±17 min) and postoperative hospital stay (3.5±1.0 vs. 7.7±1.4 days). The postoperative complication in this study was pneumothorax recurrence (11.1%), while those in Lang-Lazdunski et al.’s study includes prolonged air leak (16.5%), incomplete lung reexpansion (25%), and pleural effusion (8.5%). These comparisons seem to suggest the beneficial effect of the tubeless-SPVATS. However, a prospective randomized controlled study should be conducted to further evaluate the therapeutic efficacy and outcome of the tubeless-SPVATS.

The above information has been added to the discussion section.


In my humble opinion, I think that this article needs mejor changes and modifications before considering any publication. I hope this considerations help the authors to improve the quality of the manuscript making it more interesting.
Response: Thank you for your comment. We have tried our best to address all the reviewers’ comments and revised the manuscript accordingly. Please let me know if further revision is needed.