Author’s response to reviews

Title: Excessive intravenous crystalloid infusion after video-assisted thoracoscopic surgery lobectomy is associated with postoperative pneumonia

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Author’s response to reviews:

Dear Editor,

I would like to submit the revised manuscript entitled "Excessive intravenous crystalloid infusion after video-assisted thoracoscopic surgery lobectomy is associated with postoperative pneumonia" (Submission ID: JCTS-D-19-00075) for possible publication in Journal of Cardiothoracic Surgery.

We have revised the manuscript in accordance with the reviewers. We have made point-by-point responses to each and every reviewer comment, and the modification traces were retained in the file "JCTS-D-19-00075-V2-Trackmarked-up-20190629".

Our manuscript have been edited by a professional, native English-speaking editor at Wordvice. All the authors have nothing to disclose, and the originality of this article is guaranteed.

Your consideration is very much appreciated.

Sincerely,

Rong Yang
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Responses to reviewers:

Reviewer #1: Dear Authors, I congratulate you for the nice study you have presented. Although well written and interesting I thing that the subject would be more suitable for a pneumological or a respiratory medicine journal
Answer: Thank you very much for your suggestion! Our goal in this study was to identify the risk factors for postoperative pneumonia in patients undergoing video-assisted thoracoscopic surgery lobectomy. The cases in this study were patients undergoing video-assisted thoracoscopic surgery lobectomy, so we submitted the manuscript to Journal of Cardiothoracic Surgery.

Reviewer #2: In this manuscript the Authors tried to identify the risk factors for post-operative pneumonia in patients undergoing VATS lobectomy. They performed a retrospective analysis of a large cohort of patients operated on during one year. This manuscript should be considered as a redundant one. The Authors have recently published a similar paper: Ther Clin Risk Manag. 2019 Feb 4;15:223-231. doi: 10.2147/TCRM.S195010. eCollection 2019. Risk factors of postoperative pulmonary complications after minimally invasive anatomic resection for lung cancer. Yang R, Wu Y, Yao L, Xu J, Zhang S, Du C, Chen F.
Answer: Thank you very much! We have published a paper on Ther Clin Risk Manag, but there are three differences between this paper and the current manuscript:

Firstly, the cases between them are different. The cases in previous paper were lung cancer patients undergoing minimally invasive anatomic lung resections between 2017-01 and 2017-12 and in current manuscript are patients undergoing video-assisted thoracoscopic surgery lobectomy between 2016-05 and 2017-04. The cases in previous paper were all lung cancer patients who had undergone minimally invasive anatomic lung resections. Minimally invasive anatomic lung resections included lobectomy and segmentectomy by video-assisted thoracoscopic surgery or robotic-assisted thoracoscopic surgery. In previous paper, we found that segmentectomy was an independent risk factor of postoperative pulmonary complications. In addition, robotic-assisted thoracoscopic surgery and video-assisted thoracoscopic surgery vary widely in the length of operation and the total hospital care costs. After publication of the previous paper, some readers suggested that the interference of the two factors should be ruled out, so we continued the current study. The cases in current manuscript only included patients undergoing video-assisted thoracoscopic surgery lobectomy. We included not only lung cancer patients but also other disease types such as benign tumour etc.

Secondly, the postoperative complications studied between them are different. In previous paper, the postoperative pulmonary complications studied included acute respiratory distress syndrome, reintubation, pneumonia, the need for bedside bronchoscopy, atelectasis, pulmonary embolism, prolonged air leak, and failure to expand during the period of postoperative hospitalization. In current manuscript, in order to be more targeted, the postoperative complications we studied only included postoperative pneumonia.
Thirdly, the research results between them are different. In previous paper, we found that BMI ≥ 24.0 kg/m², single segmentectomy, bilobectomy or combined lobectomy and segmentectomy, and right lung lobe surgery were independent risk factors of postoperative pulmonary complications after minimally invasive anatomic resection for lung cancer. In current manuscript, we found that major risk factors for postoperative pneumonia following video-assisted thoracoscopic surgery lobectomy were BMI ≥24.0 kg/m², right lung lobe surgery and total intravenous crystalloid infusion grading in the postoperative 24 h ≥1500 mL. Among them, total intravenous crystalloid infusion grading in the postoperative 24 h ≥1500 mL was a risk factor for postoperative pneumonia, which was a new discovery. The total intravenous crystalloid infusion in the postoperative 24 h is a clinically controllable factor, so this finding has some guiding significance for clinical work.

Reviewer #3: Interesting paper that analyzes the risk factors for postoperative pneumonia after vats lobectomy. The rate of POP is relatively high probably due to the criteria used for definition. Among factors that are important crystalloid infusion is the most strange and the authors really do not explain the reasons why this factor should be a risk factor. A specific comment should be added in the discussion.

Answer: Thank you very much! According to your suggestion, we have added the comment in the fifth paragraph of the Discussion.