

Peer Review File

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Reviewer A

The manuscript presents interesting and clinically important results. The data are well presented, in a clear and exhaustive manner. The subjects included in the study are in adequate numbers.

Reply: Thank you for your positive feedback on our manuscript. We are glad that you find our research results interesting and clinically important. We have made efforts to present the data in a clear and exhaustive manner, and included an adequate number of subjects in the study. Your feedback is highly appreciated, and we will continue to strive for excellence in our research. Thank you once again for your comments.

Reviewer B

Comment 1: I see in your manuscript you added pneumonectomy to this study? but did not see it in the chart/tables, was that a typo?

Reply 1: Yes, it was a typo and I'm sorry for my ambiguous expression. Thank you for bringing this to our attention. We apologize for the confusion caused by the typo in our manuscript. We have made the necessary changes to the text to clarify that pneumonectomy was not included in the study.

Changes in the text: we have modified our text (see Page 14, line 275).

Comment 2: Were you able to compare just RATS lobe only: ERAS vs non ERAS?

Reply 2: Good advice, but I'm afraid not. Because of the limited number of robotic lung surgery cases in our center at this time, only lobectomy patients were included, and its small number of cases may have had an impact on the results of the study.

Comment 3: What was the compliance of the ERAS group? how was that assessed?

Reply 3: In this study, each patient followed ERAS protocol. ERAS compliance can be assessed through various methods, such as reviewing medical records, conducting patient

interviews, or using standardized assessment tools. I'm sorry ERAS compliance could not be accurately assessed in this retrospective study.

Comment 4: There may be a severe selection and time biases in these results? When was ERAS implemented? Was this the later period? Earlier period? How was the deciphered who got ERAS and who did not?

Reply 4: Because this is a retrospective study, there may be selection bias in this trial. There may also be a time bias between 2020 and 2022 when China is in the midst of the new coronavirus epidemic. The above two points have been added in the "Limitation" of the "Discussion part" of the revised draft. All surgeries are uniformly performed by the same experienced chief surgeon and his surgical team. Anesthesia is administered by an anesthesiologist who is qualified as an attending physician or above. Each patient followed ERAS protocol, but there may be differences in compliance, which were not possible to assess in this study.

Changes in the text: we have modified our text (see Page 7, line 106-108; Page 15, line 295-296).

Comment 5: Can you also look at LOS as a continuous variable outcome instead of just > or less than 5 days being the main factor, it would be more accurate to say these variables or predictors increased LOS in a continuous fashion.

Reply 5: We agree with your suggestion that LOS is influenced by various factors and changes continuously. In our study, we did not define $LOS \leq 5$ days as the sole factor for ERAS grouping. Instead, it indicates that this subset of patients experienced a shorter recovery time under ERAS. Additionally, logistic regression analysis requires a categorical variable as the dependent variable, so we assigned a value to LOS for analysis purposes. In our study, $LOS = 5$ days was chosen as the median and most frequent value, which we believe is reasonable for this study cohort.

Changes in the text: We have made the necessary changes in our text (see Page 14, line 255-259).

Comment 6: What was the intraop anesthesia and analgesia used in each group? exparel vs. cryo vs. nothing? PCA vs. PCEA?

Reply 6: In both groups, anesthesia during the operation involved tracheal intubation general anesthesia combined with regional anesthesia. The main intraoperative analgesics used were short-acting opioids, such as remifentanyl. Ropivacaine incision anesthesia was applied at the end of the procedure. Additionally, ibuprofen suppositories were administered through the anus during the postoperative period based on the pain score of the children's. These measures effectively controlled postoperative pain. Considering potential side effects of opioids and the relatively young age of most of the children undergoing lung surgery, PCIA is not used in children with this type of surgery.

Comment 7: What was OR time, cut to close skin to skin or overall room time? and what was it for each on average?

Reply 7: The term "OR time" refers to the duration between the initial incision and the closure of the skin. The average duration is 96.39 ± 30.50 minutes.

Comment 8: Can you list out your ERAS protocol in methods in further detail?

Reply 8: We have listed the ERAS protocol in further detail in the Methods.

Changes in the text: we have modified our text (see Page 7-8, line 111-124).

Comment 9: Can you explain why liver function was even looked at? it's rare to do that in adults, is that common in pediatrics and how does that help or give us more detail clinically? does it make a difference if LFTS are more elevated in one group or another?

Reply 9: Because intraoperative hypoxemia and hypercapnia are more common in children undergoing lung surgery and single lung ventilation than in adults, liver function is generally reviewed after surgery. In addition, as a national medical center, our hospital is doing research on postoperative liver function. So we should strengthen the perioperative management of pulmonary surgery in children.

Comment 10: Can you explain the high complication rate in both groups? pleural effusion, pneumonia, high temps, anemia, PTX? what were the parameters for defining each?

Reply 10: Because the main reason for including of these complications was the use of postoperative ancillary tests. Postoperative wound effusion and the high sensitivity of diagnostic b-ultrasound contribute to the higher incidence of postoperative pleural effusion. The high incidence of pneumothorax may be related to partial retention of gas during surgery, which was more challenging to identify in our retrospective analysis. Consequently, many

patients with mild complications were included in this group. Strictly speaking, some of these complications may not be directly caused by improper surgery, but they should still be considered as related complications. We classified and re-analyzed the two complications of pleural effusion and pneumothorax, and the results have been revised for reference in Table 4. Definitions of relevant complications can be found in the postoperative management section of the Methods. As for pneumonia and fever, their high incidence is indeed supported by postoperative chest X-rays and corresponding symptoms. This may be attributed to various factors, including significant differences between children and adults. Additionally, we are uncertain whether the time period of patient inclusion has influenced these findings.

Changes in the text: we have made revision to the text (see Page 8, line 131-138; Page 11, line 199-206; Page 14, line 263-274 and Table 4).

Comment 11: Pediatric surgeons performing these or thoracic board certified performing these?

Reply 11: All the cases included in the study were performed by the same chief pediatric thoracic surgeon, who is a member of the Thoracic Surgeons Branch of the Zhejiang Provincial Physicians Association.

Comment 12: Also pediatric anesthesia or adult CT surgery anesthesia?

Reply 12: Our hospital is Children's National Regional Medical Center, and each anesthesiologist specializes in pediatric anesthesia.