

Peer Review File

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Reviewer A:

Comment 1: First, it is unclear for me if it is a narrative review or a systematic review? The methodology should be explained in detail. I think after reading the article, it is more a narrative review.

Reply 1: This paper is a narrative review. We have added and described the Methods section.

Comment 2: Then, I feel quite disappointed after reading the article I still don't know which patient and when I should operate! No information and data about classical clinical scenarios, like massive sub-cutaneous emphysema in association with PAL or if there is a residual space. When should we wait and when operate (delay after first surgery?)

Reply 2: We added Tables for evaluation and prediction of PAL. In the Evaluation of PAL section, we included a description of when to reoperate, including subcutaneous emphysema and the thoracic residual cavity.

Comment 3: You should propose a table summarizing the different surgical techniques with their advantages and inconvenients.

Reply 3: We added summary of surgical techniques (Table 1). Minor comment: page 5 line 60.

Comment 4: References are missing

Reply 4: We added references.

Reviewer B:

Comment 1: This is a nice review of an important topic. Overall the manuscript is well-written and I believe it will be of interest to the readership. I have to major and one minor criticism. Minor: I would avoid the term "conservative" when actually the authors mean "non-operative". We should in general avoid equating non-operative to conservative, as sometimes the "conservative" approach is to operate!

Reply 1: Thank you for pointing this out. We have changed the description of conservative to non-surgical.

Comment 2: More discussion is needed regarding bedside interventions for PAL. The manuscript would be improved by including details on bedside blood patch and also options for bedside chemical pleurodesis such as via talc slurry or doxycycline.

Reply 2: We have added a section on "Non-surgical management for PAL" where we have included pleurodesis, autologous blood patch, and endobronchial options.

Comment 3: A complete discussion of this topic must include endobronchial options. Specifically, placement of endobronchial one-way valves has a role in certain circumstances and details should be included.

Reply 3: We have added a section on "Non-surgical management for PAL" where we have included pleurodesis, autologous blood patch, and endobronchial options.

Reviewer C:

Comment 1: The author reported "a review of surgery for postoperative prolonged air leak". At first, the authors need to have this manuscript re-written by a scientist who speaks English as a primary language. It needs considerable editing for grammar and for improving clarity.

Reply 1: Once again, we received English editing from the Clinical Research Support Office of Fukushima Medical University who speaks English as a primary language.

Comment 2: There are too many sentences that make no sense. There are too many ambiguities which should be fixed.

Reply 2: Once again, we received English editing from the Clinical Research Support Office of Fukushima Medical University who speaks English as a primary language. We have either corrected or deleted statements whose meaning is ambiguous.

Comment 3: Please use references properly. "For example, which guidelines are you referring to?"

Reply 3: We added references.

Reviewer D:

Comment 1: Thank you for this nice systematic review. I have some comments/questions: Many times in the paper, authors allude to before surgery? please indicate that you mean PRIOR to second surgery, is this correct?

Reply 1: We have changed the description to before second surgery.

Comment 2: The main thing I would like reclarified and reworded is the last two paragraphs of the surgical recommendations. It is unclear to me how the authors came to these steps and in this order and why. Is it the authors experience to do it this way? is it based on the review of the literature? a combination of? I would like it stated that for this type of air leak, location and severity, etc.... we place this type of fat pad, and WHY

Reply 2: Thank you for pointing this out. Since this part is strongly empirical for the author, we have removed descriptions for which we have no evidence. We have also summarized the advantages and disadvantages of fat pads and biological tissue coverings in Table 1.

Comment 3: Also I think more needs to be commented on the use of PROGEL as that has shown to be effective for leaks.

Reply 3: We added a note about Progel after the description of Fibrin glue. As you mentioned, the efficacy of Progel has been reported, but there were no reports comparing the various sealants, so we have listed them as equivalent to each other.