Peer Review File

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Review comments

Reviewer A

I would like to congratulate the authors with their manuscript entitled "uniportal VATS – posterior approach". The surgical technique is clearly described and the videos are very illustrative and of high quality.

I have the following comments:
- Please consider linguistic corrections by a native English speaker.
Reply: The linguistic correction have been made.

- Could this manuscript be part of VATS' special series on Advanced Uniportal VATS? If so, please clearly state this throughout your manuscript, for example in a short Introduction section.
Reply: Indeed, this manuscript is a part of the special series and this has been acknowledged.

- Please elaborate on the rationale of using a posterior instead of the conventional anterior uniportal VATS approach. Please specify the need of this alternative approach, why and in which specific cases do you recon superiority? What are the difficulties during standard approach for these segments?
Reply: In this manuscript I have briefly mentioned the benefits, as well as the drawbecks of the approach. However, there is an original manuscript, which I referred to, where this discussion has been undertaken in extensor.

- Which instrument orientation do you suggest in posterior uVATS? Please relate this to for example published classic surgical techniques by Sihoe and/or Gonzalez Rivas.
Reply: Instrumentation is not critical, the camera could be placed deliberately and this has been also added to the manuscript.

- Please clearly state which video displays which operation/resection, both throughout the manuscript and at the start of the different videos. I think that a more structured layout significantly improves readability.
Reply:The captions have been adjusted.

- Line 30: please refrain from the use of "!"
Reply: Done

- Line 36-37: please try to rephrase this sentence into a more scientific one?
Reply: Done

- Line 39: A bronchus? Do you mean the left main bronchus?
Reply: Corrected

- Line 39-40: “further on the left is a lower lung vein”. Could you please specify?
Reply: Specified

- Line 52: ICG modus: do you mean near-infrared modus?
Reply: I do – corrected

- Line 54: IGC powder: please specify (e.g., brand, manufacturer).
Reply: ICG powder has been specified

- Line 58: maybe explain why “the thorax is covered in a wonderful green landscape”? (perfusion deficit caused by exclusion of segmental arterial blood supply)?
Reply: The sentence has been modified accordingly

- Line 64: “!”
Reply: done

- Are there any technical challenges during the posterior approach? For example, limited intercostal space?
Reply: There are. In this manuscript, they have been briefly mentioned, more in the original paper, which I refer to. The narrow IC spaces is somewhat the limiting factor, yet manageable

- Could you please comment on specimen extraction feasibility? Are there any problems encountered? Can you provide tips and tricks to the readership?
Reply: For the segments it is never a problem. This was shown in my previous publication (the original paper I refer to)

- Reference 5 seems incomplete.
Reply: Indeed. Corrected

Reviewer B

This is a manuscript about uniportal VATS posterior approach for S2 and S6.
It can be understood theoretically that the structure on the dorsal side should be approached at the shortest distance.
However, as a surgical technique, as far as I can see the video, the operation is not good. The details of the posterior approach are not well described, and are insufficient to convince the reader of its benefits.

Because the posterior intercostal space is anatomically narrow, it is thought that the risk of intercostal arteriovenous injury increases, postoperative neuropathic pain, and it is difficult to extract the specimen from a narrow intercostal space.
As for dissection, the posterior mediastinum could be obstructed by the vertebral body.
I have other doubts. How do you think about hilar blockade? What should I do if critical bleeding occurs? What about S10 segmentectomy?
I personally think the lateral approach makes the most sense.
In addition, the English is too frank and is not suitable as a scientific report.

Reply: Thank you very much for your comment. A surgeon should always stick to what he is most comfortable with, especially at times of doubt whether in the new technique or in his/her own dexterity.

The hilar blockade is not possible even with a subxyphoidal approach; when bleeding occurs, there are mainly two options - fixing the bleeding directly (see my video on CTS net left upper lobe resection puVATS) or controlling, converting, and oversewing.

Reviewer C

I am honored to have an opportunity to review this article describing the detailed procedures and techniques for uniportal VATS posterior approach. The reviewer congratulates the authors on their hard work.
In uniportal VATS, the resection of the posterior segments in the case of an anterior approach is often difficult due to the field of view and accessibility. Therefore, the authors' method seems very useful. The questions I would like the authors to answer are;
1. Normally, the posterior intercostal space is narrower, therefore less maneuverable, and more prone to postoperative pain. How do the authors control these problems?
Reply: There is usually no problem extracting the segment. With the lobe, it happened occasionally if tumor was larger or the lung not sufficiently deflated. These I have addressed in my original publication, here only mentioned

2. Line 75-76, are the descriptions 'S6' correct?
Reply: No, it has been changed now. Thx

Reviewer D

Thank you for submitting a manuscript concerning uVATS by posterior approach.

I read with interest.

First of all, I think you seem to have abundant expertise in VATS/uVATS.

The wording is refined and fascinating.

Considering a very few previous references as you listed, the description is expected more comparative to conventional approaches, not only advantages but also disadvantages and/or technical difficulties if exists.

One question is that: narrower interspace and thicker chest wall in the posterior chest is problematic?
Reply: Thicker chest walls pose no problem; in the Interdisciplinary CardioVascular and Thoracic Surgery (ICVTS) there is a case (puVATS S6r followed by completion lobectomy) where the patient had 45BMI - In this case, given the size of her breasts and chest wall thickness, I presume it would have been more challenging to approach anteriorly.

The narrowness presents a problem, but not with the segments; instrumenting is in somewhat restricted, but not exaggerated. It is a sort of trading off – not dealing with the fissure, yet narrower manipulation space for the instruments.

Reviewer E

Thank you for giving me the opportunity to review the videos and the manuscript. As the author insisted, the posterior approach is suitable, especially in the case with fused fissure, for S1+2, S2 or S6 segmentectomy. Therefore, we totally agree with the author's opinion. However, the details of the videos should be improved as follows;

1. Video 1: A2 should be changed A1+2.

Reply: It is correct. However, it is less relevant to this particular video (describing S6 resection). Moreover, I acknoledged it in the manuscript.

In some cases, despite the trending oppinions (and beatiful Mr Okada's book) it seems as if there appear to be a lot of variabilities. For instance separate A1+2a-b entering from the upper hilum pol, A1+2c entering on the loco typico, another A2 (or maybe A2-4) followed by another A4-5 (please refer to my video S2left).

2. Video 2 might not be necessary because the infrared thoracoscopic observation with ICG administration is already common procedure to identify an intersegmental plane.
Reply: Even though I tend to agree, even in the modern world and very prominent clinics it is often missing, not to mention the other 7/8 of the planet ☺
3. We would like to confirm every surgical step of right S6, left S1+2, or right S2 segmentectomy in a case video like Video 1.

Reply: There are a couple of video published both in Interdisciplinary CardioVascular and Thoracic Surgery (ICVTS) and on the CTS Net, offering more insights. In the hope that they meet your expectations, I will refer to them

Reviewer F

Dear authors,
I have some comments regarding your posterior UVATS approach:
- You should write the article based on journal guidelines (Is it a case report, surgical technique, review?)
Reply: It has been corrected

- Then, you should explain more in detail (installation patient and team, specific equipment, camera 0 or 30°, indication, results
Reply: The details you are referring to are described elsewhere, yet referred to it. Camera in VATS surgery is never 0, at least from what I believe to know

- Make a discussion: advantages and inconvenients of the technique. Why posterior instead of anterior? adherences? Conversion?
Reply: It has already been done extensively in my previous publication. Here I only briefly mentioned it.

The video are nice and comprehensive
Reply: Thanks

Reviewer G

I'd like to thank the author for this submission within the Advanced Uniportal VATS Special Issue by Dr. Galvez and Ugalde.

I have some comments for the authors:

1. English grammar should be reviewed, we encourage authors to provide more technical language.

Reply: More technical language is provided

2. An initial introduction describing the reasons for attempting a posterior approach instead of the more common lateral uniportal VATS is required.

Reply: This as well has been added/adjusted

3. Evidence regarding this approach, and if available comparison with conventional lateral uVATS, advantages and disadvantages, short and long-term outcomes in terms of chest tube, hospital stay, postoperative pain,

incidence of chronic intercostal pain, might be discussed

Reply: It already has been made in the original paper published years ago I am referring to. Yet, briefly mentioning pro at contra doesn't do harm.

4. More structured description of the whole procedure should be included: set-up and patient's position, surgeon/assistant/nurse positioning, access description.

Reply: provided

5. I think the mentioned resections (right S2, right S6, left S6) must be carefully described, including tips&tricks, and potential pitfalls and caveats. What about left S1+2? What about S10?

Reply: Left 1+2 is feasible and done, s10 less so (hard to distinguish from s9 during surgery). Nevertheless, I am willing to give a try

6. Authors should carefully review anatomical landmarks in the videos (left A2 is A1+2c,…)

Reply: It is correct. However, it is less relevant to this particular video (describing S6 resection). Moreover, I acknoledged it in the manuscript.

In some cases, despite the trending oppinions (and beatiful Mr Okada's book) it seems as if there appear to be a lot of variabilities. For instance separate A1+2a-b entering from the upper hilum pol, A1+2c entering on the loco typico, another A2 (or maybe A2-4) followed by another A4-5 (please refer to my video S2left).

7. An insight into how to deal with a potential complication during a posterior approach must be of reader's interest (how to access pulmonary artery…).

Reply: When bleeding occurs, there are mainly two options - fixing the bleeding directly (please refer to my video on CTS net left upper lobe resection puVATS) or controlling, converting, and oversewing. You cannot control the main stem PA from behind

8. More details regarding instrumentation through narrower intercostal spaces and thicker chest wall should be included.

Reply: The instrumentation has been mentioned/adjusted. There is, however, no specificity in the instrumentation. You could adjust the placement of the camera - I usually put it in the middle, but stapling could demand to alter it as needed.