Peer Review File

Article Information: https://dx.doi.org/10.21037/shc-21-15

Reviewer A

The authors refer to their procedure as Reverse-direction VATS.

I agree that this procedure is safer than the existing procedure via single- or two-incision methods, but it is not so original.

I have some comments and questions as follows:

1. Please indicate the procedure of hilar lymph node dissection.

Reply 1: we added some data about the procedure of hilar lymph node dissection. (see Page 3, lines 68-69, 74, 78-79)

Changes in the text: and interlobar lymph nodes were dissected (lines 68-69), (station 12) (line 74), (station 10L) (line 78), (station 4L, 5, 6, and 7) (lines 78-79).

2. Line 101, laparoscopy: Isn't it thoracoscopy?

Reply 2: we have modified our text as advised (see Page 4, lines 101-102)

Changes in the text: this can be controlled more readily under thoracoscopy than if it occurs in the upper trunk of the left pulmonary artery.

Reviewer B

The authors present a new method/procedure of left upper lobectomy with two-port-VATS that helps thoracic surgeons perform it through limited access port(s) with less difficulty. However, the reviewer thinks starting left upper lobectomy by exfoliating interlobar fissure itself is NOT novel, and an advance of this report is to indicate that it is a safer way to perform VATS left upper lobectomy than the typical measures mainly performed by Chinese thoracic surgeons in uniportal VATS lobectomy, approaching pulmonary arteries first. I have several comments that the authors might consider.

Major comments:

1. Grammatical editing is recommended for the whole manuscript.

Reply 1: We have corrected the manuscript by a native English speaker.

2. Lines 91-"Technical discussion"

As said above, this report will be more convincing if the authors compare this method with the typical method mainly performed in uniportal VATS lobectomy in China, exfoliating pulmonary artery first.

Reply 2: Thank your kind advice, which is also our next study.

3. Line 101

The authors should indicate what they compare with their method and the reason why "the blood vessels rupture and bleeding are easier to control" (-than what?). The comparative degree is used when two or more things are compared.

Reply 3: Thank you for your kind reminder, we have modified our text as advised (see Page 4, lines 100-105)

Changes in the text: For one thing, these vessels are relatively thin and easy to expose. Even if the blood vessels rupture and bleed, this can be controlled more readily under thoracoscopy than if it occurs in the upper trunk of the left pulmonary artery, because it is directly on the field of view and is close to the operating port. The paths of these blood vessels make them easy to cut with a stapler or ligation, and there is no need to excessively free blood vessels or stretch the lobes.

4. Lines 91- "Technical discussion"

The reviewer thinks that discussing a hot topic, 'which is the better way to improve patients' outcomes, pulmonary "vein-first" or "artery-first"?'1) may be very important, when the authors claim the superiority of their method. However, I do not feel strongly that the authors must respond to my comment.

1) Wei S, et al. Effect of vein-first vs artery-first surgical technique on circulating tumor cells and survival in patients with non-small cell lung cancer: A randomized clinical trial and registry-based propensity score matching analysis. JAMA surg.2019; 154(7):e190972.

Reply 4: 'which is the better way to improve patients' outcomes, pulmonary "vein-first" or "artery-first"?' is still a controversial topic (Toufektzian, L., et al., Does the sequence of pulmonary vasculature ligation have any oncological impact during an anatomical

lung resection for non-small-cell lung cancer? Interact Cardiovasc Thorac Surg, 2015. 20(2): p. 260-4).

No matter which way is used, it is necessary to avoid the spread of tumor cells caused by improper operation. Such as: 1) use small dry gauzes clamped by oval forceps to pull and press lobe, 2) avoid going back and turning the lobe repeatedly, 3) avoid clamp the lung tissue near the tumor, and so on.

Minor comments:

1. Line 48: Please check out whether the reference number "1" on the word "checklist" is correct.

Reply 1: We have checked out and deleted the reference number "1" on the word "checklist". (see Page 2, line 55)

2. Line 58: The authors should explain what "reverse-direction" means at first.

Reply 1: we added some data to explain what "reverse-direction" means as advised (see Page 2, lines 40-42, 44-47)

Changes in the text: (Lines 40-42) Usually, the surgical sequence of VATS upper left lobectomy is to first transect the LUP vein or the upper trunk of left pulmonary artery, then transect the LUP bronchus, and finally separate the interlobar fissure. (Lines 44-47) We first transected the A^{4+5} and A^{1+2}c branches, the LUP bronchus, the upper trunk of the left pulmonary artery, and the LUP vein from bottom to top through the interlobar fissure, which is the reverse of the traditional sequence. It is called reverse-direction.

3. Line 64: The reviewer thinks "the operator" is more adequate than "chief surgeon".

Reply 3: we have modified our text as advised (see Page 3, lines 65-66)

Changes in the text: The operator stood on the ventral side of the patient

4. Line 66: The reviewer couldn't understand what "ability equipment" means. Does it mean energy-based device?

eg- "We mainly used the ultrasonic knife as an energy-based device, "

Reply 4: we have modified our text as advised (see Page 3, line 67)

Changes in the text: An ultrasonic knife was used as mainly energy-based device.

5. Line 98: The reviewer couldn't understand what "portal-nail lymph node" means and find any articles describing this term. The authors should explain.

Reply 5: we have modified our text for understanding. (see Page 4, lines 98-99)

Changes in the text: especially when they encounter severe adhesion of hilar vascular or calcification of hilar lymph node.

6. Line 101: The word "laparoscopy" may be incorrect, and "thoracoscopy" is the right term.

Reply 6: we have modified our text as advised (see Page 4, lines 101-102)

Changes in the text: this can be controlled more readily under thoracoscopy than if it occurs in the upper trunk of the left pulmonary artery.

7. Line 124, 125, and 126: The authors describe "interlobar", "interlobular" in the same paragraph. It is supposed the word "interlobular" is incorrect because pulmonary lobule can not be seen under thoracoscopy.

Reply 7: we have modified our text as advised (see Page 5, lines 126-128)

8. Figure 1: A picture indicating operative findings requires higher resolution. Moreover, the structures are hard to be recognized because of the dashed lines and numbers added to the picture. If the authors cannot provide a picture with higher resolution, some schema or graphic illustrations can explain more clearly.

Reply 8: we have modified Figure 1 as advised.

9. Correction of the manuscript by a native English speaker is recommended.

Reply 9: We have corrected the manuscript by a native English speaker.