Peer Review File

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<mark>Reviewer</mark> A

1.Suggest to add information about specific materials and limitations on access for specific segmentectomy.

2. What instruments did we use?

Response to Reviewer A

1.Thank you for your comments. Regarding the instruments used for this technique, we used specifically designed 42cm instruments by Scanlan. These instruments are extremely useful in patients with specific physical characteristics (tall patients) but also facilitate the resection of segments S1 and S3 of the right lung. Please see the attached file.

2.We understand that the SVATS technique for segmentectomy resections can be quite challenging and there are limitations to consider. These include left-sided procedures which can be more difficult depending on the position of the heart; patients with high BMI and subsequently raised diaphragm but also the posterior segments S2,S6,S9 and S10 should be attempted only once confidence and experience in the more accessible segments have been achieved. Although these segmentectomies can be approachable by opening the fissure, in our experience we believe that a traditional intercostal VATS technique is more suitable for these cases. All the above have been extensively described in one of our previous publications. Please see reference : https://www.annalsthoracicsurgery.org/article/S0003-4975(18)30990-1/pdf

Uniportal Subxiphoid Video-Assisted Thoracoscopic Anatomical Segmentectomy: Technique and Results

Uniportal Subxiphoid Video-Assisted Thoracoscopic Anatomical Segmentectomy: Technique and Results Jason Ali, MB BChir, PhD,* Fan Haiyang, MD,* Giuseppe Aresu, MD,*

www.annalsthoracicsurgery.org

Changes to the Manuscript

1.Line 100: "Subxiphoid VATS 42m instruments were specifically ordered and designed for this approach (please see supplementary figure 1)

2. Line 215: "Another common difficulty for segmentectomies, would be the posterior segments (S2,S6, S9 and S10), which can be challenging. Although these segmentectomies can be approachable by opening the fissure, in our experience we believe that in some cases a traditional intercostal VATS technique could be preferable and should be attempted once confidence and experience in the more accessible segments have been achieved."

Reviewer B

This procedure itself has been performed and is not a new procedure, but there are few facilities that perform this procedure and it is valuable information.

Since this procedure does not go through the intercostal space, it is a great advantage that there is less pain and no PTPS occurs.

1.It seems that a long special instrument is required to operate from subxiphoid. For readers who are going to perform this procedure, please describe the equipment specific to this procedure.

2.Describe areas that are difficult to perform segmentectomy from subxiphoid. Is segmentectomy of S6 or S9-10 possible with this procedure?

3.Although it is judged by the Inflate-deflate line in the identification between segments, it seems that it is difficult to secure the visual field when the lungs are inflated. How about using ICG?

Response to Reviewer B

1.Thank you for your comments. Regarding the equipment used for this technique, we used specifically designed 42cm instruments by Scanlan. These instruments are extremely useful in patients with specific physical characteristics (tall patients) but also facilitate the resection of segments S1 and S3 of the right lung. Please see file attached.

2.We understand that the SVATS technique for segmentectomy resections can be quite challenging and there are limitations to consider. These include left-sided procedures which can be more difficult depending on the position of the heart; patients with high BMI and subsequently raised diaphragm but also the posterior segments S2,S6,S9 and S10 should be attempted only once confidence and experience in the more accessible segments have been achieved. Although these segmentectomies can be approachable by opening the fissure, in our experience we believe that a traditional intercostal VATS technique is more suitable for these cases. All the above have been extensively described in one of our previous publications. Please see reference : https://www.annalsthoracicsurgery.org/article/S0003-4975(18)30990-1/pdf

3. The ICG suggestion is indeed useful and a great suggestion. Limitations of identifying the segment plain are the same between SVATS and traditional uniportal VATS. However, ICG imaging requires specific equipment which unfortunately don't have in our unit. Instead, we are using inflatin and deflating technique while performing an anatomical segmentectomy. Additionally,, we cooperate with our radiology department colleagues in order to have a thorough mapping of the segments as a preoperative asessment.

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