

Peer Review File

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Review comments

Reviewer A

Thank you for your contribution.

To clarify

3 subxiphoid thymectomy methods are studied. All of the surgeries are performed with CO₂ insufflation.

1- please detail the intubation type (Single vs double lumen) and ventilation pressures and frequency during surgery.

2- please detail the flow and pressure of CO₂.

Reply: We described in page 3.

While detaching the thymus from the posterior surface of the sternum using an energy device, CO₂ insufflation enlarges the space behind the sternum. A hole is made in the bilateral mediastinal pleura by opening and closing the tip of the energy device, which exposes the bilateral pleural spaces and separates the mediastinal pleura from the posterior surface of the sternum. CO₂ insufflation displaces the lungs dorsally while maintaining ventilation; therefore, single-lung ventilation is unnecessary. One trick for smoothly performing this surgery is to avoid using positive end-expiratory pressure (PEEP) in the artificial ventilator settings. The lungs expand bilaterally when PEEP is used, which disturbs the visual field. If the blood CO₂ concentration increases due to hypoventilation, it can be managed by increasing the ventilation frequency.

3- I do not use a forth port for subxiphoid robotic thymectomy. My assistant helps me through gelpport placed subxiphoidly.

Reply: We added the following sentences in page 9.

Although a good assistant can develop the operative field without using an arm retraction, using an arm retraction makes it possible to pull the thymus in the operator's desired direction and create a good field of view in a narrow and limited space.

4- You need to have comments on high BMI people for subxiphoid approach

Reply: We added the following sentences in page 10.

The abundance of the thymus and surrounding adipose tissue complicated any approach in severely obese patients. In the subxiphoid approach, the most proximal adipose tissue is first dissected from the pericardium to identify the pericardial layers. thereafter, the arm retraction is used to retract the thymus in the appropriate direction to secure the visual field, and the pericardial layer is dissected cranially.

5- Finally please accept and discuss that " Robotic subxiphoid has the best exposure compared to VATS and

Reviewer B

The author reported less invasive surgical technique for thymectomy. This paper is well-written and apt as a "Surgical technique" of VATS. Please edit and improve grammar about a part of the text.

For example, Line 201 and Line 226.

Reply: I asked a proofreading company to correct my English.

Reviewer C

excellent article

Reply: Thank you for your comment!

Reviewer D

This is a very well written manuscript describing in detail the technique the authors use. My only comment is if the authors have published on the outcomes of their technique?

Reply: The initial results of SPT are described in the following papers. I am currently writing about TRT. I don't have enough experience with Uni-RATS yet. We added literature.

9) Suda T, Hachimaru A, Tochii D, et al. Video assisted thoracoscopic thymectomy versus subxiphoid single-port thymectomy: initial results. *European Journal of Cardio-Thoracic Surgery* 2016;49:i54-i58.