Author’s response to reviews

Title: Robotic-assisted simultaneous resection of a left-sided thymic neoplasm and a right-sided lower thoracic paravertebral neoplasm via the same ports and two docking steps: A case report

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Responses for the comments of Reviewer #1:

I congratulate you for this nice case report. da Vinci Robot is certainly a valid option for miniinvasive surgery of the mediastinum. However robot is not an alternative to VATS but a different way to approach the same necessity in thoracic surgery. Looking at the CT scan I do not agree with the fact that a VATS resection of both neoplasm should have needed a bilateral thoracoscopy. However, I agree with you that da Vinci Surgical system migh be a promising alternative to VATS in "selected cases”. I suggest to revise the discussion section focusing also on operative time and costs of the procedure. Moreover a language review is needed before the paper could be suitable for publication.

Reply:

I agree with the reviewer that a VATS resection of both neoplasms might not need a bilateral thoracoscopy. However, since one tumor located at the left-sided of the anterior mediastinum and the other one located at the right-sided paravertebral lower thoracic region, conventional thoracoscopic surgical procedure with rigid instruments simultaneously resected these two tumors via the same ports might be technically challenging. With the benefits of minimally invasive surgery and overcoming the limitations of conventional thoracoscopic techniques, surgical robot with articulating surgical instruments was introduced in the present case.
Discussion about the operative time and costs of robotic procedure were added in the discussion section. (I) Robotic surgery is a time-consuming procedure. The increase in surgical time was due to the time required to docking, undocking and exchanging instruments. In our opinion, the duration of surgical time can be shortened with the experience of more cases; (II) Due to the high cost of installation and maintenance, cost-effectiveness is a practical burden associated with the introduction of da Vinci surgical system. Most patients could not afford to the cost of robotic surgery without health insurance coverage. Over the years, many companies have tried to develop competing robotic devices to market which might challenge the monopoly situation of da Vinci surgical robot. A cost reduction of robotic surgery is expected in the future.

The revised paper has been edited by a professional language editing service.

Responses for the comments of Reviewer #2:

This paper describes the resection of two mediastinal lesions with the Davinci robotic platform. In my opinion the paper has a limited interest because the advantages and the approaches of the robot-assisted surgery are well known. The authors must declare the version of the platform (DaVinci Si, I suppose).

Reply:

Minimally invasive operation for mediastinal tumor has been widely accepted and recommended because its clinical benefits in terms of lower blood loss, reduced length of stay and less postoperative pain compared with open approach. At present, video-assisted thoracic surgery is the most preferred procedure for mediastinal mass. In addition to the clinical benefits of minimally invasive surgery, robotic surgery was introduced to overcome some of the limits of classic thoracoscopy. The advantages including stable operator-controlled camera, a high-definition three-dimensional view, articulating surgical instruments, tremor filtration and improved ergonomics for the surgeon. Despite the increasing popularity of robotic surgery, there is no unequivocal evidence to show its superiority over traditional thoracoscopic procedure.

Based on our experience, da Vinci Surgical system might be a promising alternative to VATS in selected cases. Since one tumor located at the left-side of the anterior mediastinum and the other one located at the right-side paravertebral lower thoracic region, conventional thoracosscopic surgical procedure with rigid instruments simultaneously resected these two tumors via the same ports might be technically challenging. In order to simplify the operative technique, surgical robot was introduced for the presented patient. And surgical robot is safe and feasible procedure for this usual case.

A Vinci Si robotic system (Intuitive Surgical, Inc., USA) was used for this operation. The details of surgical robot were provided in the text.
Responses for the comments of Reviewer #3:

I congratulate the Authors for submitting this case report. Even if the case is well described, it does not add anything to the current literature. I firmly believe that da Vinci surgical system allows an ideal procedure for mediastinal tumor but in this presented case, in my opinion, we cannot demonstrate a real advantage of the robotic procedure compared to thoracoscopic surgery. I'm sure that in your surgical practise you have experienced much more complex cases where the robotic approach was more appropriate.

Reply:

A patient complicated with a left-side thymic tumor and a right-side paravertebral lower thoracic neoplasm is not commonly seen in clinical practice. Optimal surgical procedure is important for simultaneous resection of these two tumors. The aim of the case report is to present the port placement strategies and details of the one-stage minimally invasive procedure of the operation.