

Peer Review File

Article Information: <https://dx.doi.org/10.21037/acr-21-59>

Response to the Reviewers' Comments:

Comment 1: The author should show intraoperative finding that tumor had spinal cord extension.

Reply 1: A more complete description of intra-operative findings indicating nerve root involvement was added to page 3, lines 35-36.

Changes in the text: "...which extended towards the neural foramen was completely identified; the extent of the stalk could be visualized with traction of the mass away from midline."

Comment 2: In page 3, line 41, probably CSF is a cerebrospinal fluid. The author should explain an abbreviation beforehand.

Reply 2: This change has been made in the text.

Changes in the text: "Cerebrospinal fluid".

Comment 3: There was no comment on resected tumor, pathologically (macroscopic finding, size, capsule \pm , atypia). Generally, pathological findings are needed.

Reply 3: A report of the pathology result was added to the text on page 3 line 38.

Changes in the text: "Permanent pathology confirmed a diagnosis of benign schwannoma."

Comment 4: Did the author consult spine surgeon on spinal cord extension during surgery? The author should comment on it in discussion.

Reply 4: On page 3, line 42, a clarification was added that the return to the operating room was with the assistance of a neurosurgeon colleague.

Changes in the text: "In conjunction with a neurosurgeon..."

Comment 5: It will be nice if the authors can add useful new information such as technique to avoid damaging the important major nerve root T1 that comes out of the T1/2 neural foramen, or technique to avoid CSF leak.

Reply 5: A more extensive analysis of the intraoperative findings, surgical technique that resulted in dural injury, and suggestion to avoid future complications was added to the discussion on page 4, lines 71-74.

Changes in the text: "Additionally, the degree of traction required in this case to expose the length tumor stalk extending towards the neural foramen should have raised the index of suspicion for a possible dural injury and led to prophylactic treatment."

Comment 6: This report would be enriched adding surgical pictures or, much better, videos to increase its educational value.

Reply 6: Unfortunately, we have neither intraoperative pictures nor intraoperative video.
Changes in the text: N/A

Comment 7: VATS approach in this case is not fully justified by reference 2.

Reply 7: The VATS approach, as described in the text, was chosen based on an extensive conversation between surgeon and patient.

Changes in the text: N/A

Comment 8: Figures 1 and 2 are showing rather the same to the reader. To me, just Figure 2, being much more illustrative, is needed.

Reply 8: These two images demonstrate two significant and critical findings as described in the figure captions: figure 1 demonstrates proximity to significant vasculature, and figure 2 demonstrates chronic changes to and tumor extension into the neural foramen.

Changes in the text: N/A

Comment 9: An image showing CSF leak would be very much welcome.

Reply 9: An image has been added with caption, see page 3 line 42, page 7 lines 140-142.

Changes in the text: "Figure 3 Axial CT myelogram at the level of the T1-T2 neural foramen with the patient in the right lateral decubitus position demonstrating free communication of intrathecal contrast into the right pleural space and gas extending into the thecal space."

Comment 10: The use of pleurodesis using talc slurry and tetracycline besides pleural abrasion need some comments and being justified by references. To my understanding, apical pleurectomy would be equally effective and not jeopardising patient's pulmonary function. Besides, apical pleural tent was created at reintervention.

Reply 10: An explanation with reference was added to explain this decisionmaking, see pages 4-5 lines 75-80.

Changes in the text: "In treating this dural injury, given the significant volume of cerebrospinal fluid leakage and symptomatology, we elected for an aggressive transthoracic approach with multimodal pleurodesis to reduce the risk of the patient requiring a morbid complex laminectomy. In the authors' experience and based on literature review indicating safety of combined modalities for pleural disruption, we elected to use talc, tetracycline, and mechanical pleurodesis (7). The patient suffered no ill effects from the procedure with no effect on pulmonary function."

Comment 11: Subarachnoid-pleural fistula has been successfully treated by non-invasive positive pressure by some (doi: 10.1097/brs.0b013e3181dc57c1 and others); a short comment on that therapy could be added in your manuscript.

Reply 11: This may be a viable option in minimally symptomatic patients with low-volume CSF leak; our patient didn't meet these criteria. Our decision-making was clarified on pages 4-5 lines 75-80 as noted above.

Changes in text: As noted in comment 10.

Comment 12: The use of abdominal fat in your case instead of pericardial fat was probably due to the absence of the last in a slender, thin patient. You could also comment on that since thoracic surgeons are using pericardial fat pads frequently for the coverage of risky bronchial anastomoses, oesophagus, etc., and would be surprised reading your technique.

Reply 12: Additional explanation regarding the use of an abdominal fat patch has been added to page 5, lines 80-82.

Changes in text: “Addition of a fat pad patch, a commonly used technique to protect intrathoracic anastomoses or reinforce esophageal injury repairs, is typically via a pericardial fat pad. However, given a paucity of intrathoracic fat, an abdominal fat pad was used.”

Comment 13: The causes of CSF leak after surgery are extensively discussed at doi: 10.21037/atm.2019.01.04. Why not including this reference or similar in your manuscript?

Reply 13: As this was not a spine surgery, we have refrained from commenting on the incidence of dural injury and cerebrospinal fluid leak associated with spine surgery.

Changes in text: N/A

Reviewers' Comments:

Reviewer A

This manuscript describes a case report ‘Video-assisted thoracoscopic resection of a thoracic inlet schwannoma with neuroforaminal involvement’. There were some minor revisions. Basically, in this manuscript some elements are missing as a case report.

Some minor revisions are shown as below.

1. The author should show intraoperative finding that tumor had spinal cord extension.
2. In page 3, line 41, probably CSF is a cerebrospinal fluid. The author should explain an abbreviation beforehand.
3. There was no comment on resected tumor, pathologically (macroscopic finding, size, capsule ±, atypia). Generally, pathological findings are needed.
4. Did the author consult spine surgeon on spinal cord extension during surgery? The author should comment on it in discussion.

Reviewer B

Thank you for your submission. VATS resection of paraspinal neurogenic tumor has been well described in the literature and frequently applied in clinical practice. This paper did not describe new information or technique that can enrich the current understand. It will be nice if the authors can add useful new information such as technique to avoid damaging the important major nerve root T1 that comes out of the T1/2 neural foramen, or technique to avoid CSF leak.

Reviewer C

A nice and interesting case with excellent outcomes. I'm writing a few comments and I thank the authors for reading and considering them.

1. As commented by the authors, thoracic inlet problems are not frequently approached by conventional VATS approach. Instead, video-assisted, or robotic trans-axillary approach, cervical, supraclavicular, or trans-manubrial approaches have been published and illustrated in the literature. This report would be enriched adding surgical pictures or, much better, videos to increase its educational value.
2. VATS approach in this case is not fully justified by reference 2. The manuscript by Kocaturk et al reports 66 lesions of the posterior mediastinum, not thoracic inlet tumours. I don't believe that VATS approach, although a valid option, is improving outcomes compared to cervical and supraclavicular approaches to apical chest small tumours like this one.
3. Figures 1 and 2 are showing rather the same to the reader. To me, just Figure 2, being much more illustrative, is needed.
4. An image showing CSF leak would be very much welcome.
5. The use of pleurodesis using talc slurry and tetracycline besides pleural abrasion need some comments and being justified by references. To my understanding, apical pleurectomy would be equally effective and not jeopardising patient's pulmonary function. Besides, apical pleural tent was created at reintervention.
6. Subarachnoid-pleural fistula has been successfully treated by non-invasive positive pressure by some (doi: 10.1097/brs.0b013e3181dc57c1 and others); a short comment on that therapy could be added in your manuscript.
7. The use of abdominal fat in your case instead of pericardial fat was probably due to the absence of the last in a slender, thin patient. You could also comment on that since thoracic surgeons are using pericardial fat pads frequently for the coverage of risky bronchial anastomoses, oesophagus, etc., and would be surprised reading your technique.
8. The causes of CSF leak after surgery are extensively discussed at doi: 10.21037/atm.2019.01.04. Why not including this reference or similar in your manuscript?