Dear Prof. Jerzy Tadeusz Chudek,

Re: Manuscript ID: 92843

Please find the attached revised version of our manuscript “Clinical outcome in giant cell tumor of the thoracic spine after two total en bloc spondylectomies including one emergency surgery: a case report and review of literature”, which we would like to resubmit for publication in *World Journal of Clinical Cases*.

We would like to thank *World Journal of Clinical Cases* for giving us an opportunity to revise our manuscript. Your comments and those of the reviewers were highly insightful and enabled us to greatly improve the quality of our manuscript. We have carefully taken their comments and suggestions into consideration in preparing our updated revision. Moreover, we revised the inaccurate language expression, and re-polished the article. These revisions could result in a manuscript that is clearer, more compelling, and broader. In addition, the formatting requirements and the reference style of this journal have been checked, and the language of manuscript had been improved by the Wolters Kluwer editing services. All changes made to the text are highlighted in yellow. The following summarizes how we responded to reviewers' comments.
We again greatly appreciate your careful review work. Look forward to your further positive information on our revised manuscript.

With Best Regards,

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Response to the reviewers’ reports

Thanks to all the reviewers for their helpful comments. We have addressed these comments as fully as possible below and have revised the manuscript accordingly as shown in the highlighted text with yellow color. All the number of pages and figures in this response was calculated according to the revised clean paper, in which all the revisions have been accepted. The words with red color below indicate the changes in the paper.

Reviewer #1:

Dear editor and authors, I have read the manuscript entitled “Clinical outcome in giant cell tumor of the thoracic spine after two total en bloc spondylectomies including one emergency surgery: a case report and review of literature” very carefully. The authors reported a rare case of acute paraplegic patient with thoracic spinal giant cell tumor (GCT) who underwent repeated total en bloc spondylectomy (TES) surgeries. It is written satisfactorily with helpful figures. The topic is relevant, interesting, and original. This case study reported the successful clinical challenges and nuances of a successful management of the patient presented with thoracic spinal GCT resected using the TES techniques. The authors achieved a safer and more optimistic solution satisfactorily although the duration of follow-up was a little bit short. The language applied throughout the manuscript is coherent. Nevertheless, the manuscript has some shortcomings that need to be revised again.

Author response and action:

Thank you very much for your kind evaluation of our research and your valuable suggestions. We have revised the original manuscript based on your suggestions. Your comments are highly insightful and enable us to greatly improve the quality of our manuscript. In the following pages are our point-by-point responses to each of the comments.
1. Please ensure that the information is presented according to the CARE checklist.

**Author response and action:**

Thank you very much for your careful review and the reminder. We have checked and ensured that the case report complied with the CARE guidelines.

2. At the end of Introduction section, the authors mentioned a 15-month follow-up. However, it was mentioned in Figure 1 that the patient first visited emergency department in 2020 and the patient’s daily activities were normal in 2023. Please clarify the actual follow-up duration.

**Author response and action:**

Thank you very much for your careful review and helpful suggestion. The patient in this case report recently returned to our hospital for follow-up. We have changed the description of the follow-up time to a more accurate description in the article and added the latest follow-up data.

Introduction section, the description “The patient returned to an active lifestyle one
month after the second surgery, and no recurrence of the GCT was observed at the 18-month of the second postoperative follow-up.”

Fig. 1 Timeline of the occurrence of major clinical events during the treatment and follow-up.

Fig. 8 A, B Anteroposterior and lateral radiographs and C MRI image showing a stable construct and no local recurrence at the 18-month follow-up after the second three-level total en bloc spondylectomy.

3. The possible complications resulting from the techniques applied should be mentioned more clearly. What can the surgeons do to avoid such lethal complications?
Author response and action:

Thank you very much for your sincere suggestion. Your suggestions can greatly improve the quality of this article. We revised it according to your suggestion in introduction and discussion section.

Introduction section, the description “Although total spondylectomy might be the best strategy to avoid recurrence, surgical technique is challenging with the possibility of severe complications. Because spinal GCT is adjacent to the spinal cord, nerve root, aorta, vena cava, and vertebral artery. It is difficult and risky to achieve the goal of en bloc resection, leading to higher incidence of complications (vascular injury, pleural effusion, cerebrospinal fluid leakage, neurological deterioration, etc.) compared with other spine surgeries.”

Discussion section, the description “In order to avoid lethal complications, our experience is to use an ordinary wire saw from the intervertebral foramen to the inner wall of the vertebral pedicle to cut off the pedicle, or use a nerve stripper to stick to the inner wall of the vertebral pedicle to protect the nerves and dura mater, and use a special curved osteotome to cut off vertebral pedicles. Moreover, our hospital has made a self-made foldable front large blood vessel baffle, and used a self-made wire saw or long surgical knife to cut the intervertebral disc by two-step technique.”

4. Please give a more detailed description of the possible complications resulting from thoracic GCT as most of the readers of the journal may not be familiar with the field.

Author response and action:

Thank you very much for your sincere suggestion. We added corresponding descriptions according to your suggestion in introduction section.

Introduction section, the description “The complications of spinal GCT include pathologic fracture, lung metastases, nerve root compression in vertebral location, and
high postoperative recurrence rate. Patients with a spinal GCT most commonly present with persistent back pain and varying degrees of neurological dysfunction. A large cervical/thoracic GCT will result in sensory and motor deficits, or even paraplegia of extremities secondary to spinal cord compression. A lumbar GCT with the involvement of the sacral plexus may induce bladder and bowel symptoms.”

5. The authors claimed in Conclusion section that “This is the first report of a patient with sudden back pain and acute paraplegia secondary to thoracic spinal GCT who underwent emergency TES, successfully recovering spinal cord function and avoiding permanent paralysis.”. The authors claimed the lesson of new information to our surgical knowledge from their case report. Is this really the first report? The authors need to provide compelling reasons in the manuscript why their case merits publication. How is this specific case a contribution to the literature? Please clarify the innovation in your case presentation. When I search “giant cell tumor thoracic surgery” in PubMed, there comes out to be more than 400 search results. Therefore, I recommend the authors to collate all the related cases reported in the literature and list a table to demonstrate the rarity and novelty of the present case to the authors, worth to be presented and published to raise the awareness of the clinician and undoubtedly add contribution to the scarce literature on this topic.

**Author response and action:**

Thanks for your critical suggestion. Your suggestions can greatly improve the quality of this article. We revised it according to your suggestion in discussion section.

Discussion section, the description “Table 1 gives a summary of case reports of spinal GCT treated with total spondylectomy. None of these patients had acute progression of paraplegia secondary to a spinal GCT and did not undergo total spondylectomy in emergency surgery. Lucasti et al reported a patient with T8 GCT presented with acute paraplegia of bilateral lower extremities, but this patient only received laminectomy and excisional biopsy of the epidural mass. Therefore, to our knowledge,
this is the first case report of a patient who suffered sudden back pain and acute paraplegia secondary to a GCT of the thoracic spine and underwent emergency TES, successfully recovering spinal cord function and avoiding permanent paralysis.”

Table 1 Summary of previous case reports of total spondylectomy for spinal GCT.

<table>
<thead>
<tr>
<th>Authors (country)</th>
<th>age and gender</th>
<th>Site of GCT</th>
<th>Treatment</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hua et al. (China)</td>
<td>41-y-old male</td>
<td>T5 vertebra</td>
<td>TES</td>
<td>24-month</td>
</tr>
<tr>
<td>Kinoshita et al. (Japan)</td>
<td>20-y-old female</td>
<td>L3 vertebra</td>
<td>TES</td>
<td>24-month</td>
</tr>
<tr>
<td>Al-Shamary et al. (Saudi Arabia)</td>
<td>29-y-old male</td>
<td>T1 vertebra</td>
<td>Total spondylectomy</td>
<td>10-month</td>
</tr>
<tr>
<td>Yonezawa et al. (Japan)</td>
<td>51-y-old male</td>
<td>T12 vertebra</td>
<td>Total spondylectomy</td>
<td>12-month</td>
</tr>
<tr>
<td>Inoue et al. (Japan)</td>
<td>35-y-old female</td>
<td>T11 vertebra</td>
<td>TES</td>
<td>3-month</td>
</tr>
<tr>
<td>Matsumoto et al. (Japan)</td>
<td>47-y-old female</td>
<td>T5 vertebra</td>
<td>Total spondylectomy</td>
<td>30-month</td>
</tr>
</tbody>
</table>

*T thoracic, L lumbar, TES total *en bloc* spondylectomy*