Subject: Revision and resubmission of manuscript

Dear Reviewers,

Thank you for your letter and the opportunity to revise our paper on ‘PULMONARY METASTASIS OF RECURRENT GIANT-CELL TUMOR IN PROXIMAL HUMERUS : A CASE REPORT.’ The suggestions offered by the reviewers have been immensely helpful, and we also appreciate your insightful comments on revising the abstract and other aspects of the paper.

I have included the reviewer comments immediately after this letter and responded to them individually, indicating exactly how we addressed each concern or problem and describing the changes we have made. The revisions have been approved by all four authors and I have again been chosen as the corresponding author. The changes are marked in red in the paper as you requested, and the revised manuscript is attached to this email message.

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| Reviewer comments | Author respond | Correction on manuscript |
| *An interesting case, the paper has potential for publication in the JKKI, however major revision is needed. Beside the rarity of the case, the authors has to find and describe the learning point on reporting this case* | The author has describe the learning point on this caseThe author suggest that multiple surgery would increase local recurrence that will lead to metastasis | Line 8-9-10:Asymptomatic metastasis to right lower lobe of lung was found on plain radiograph. We suggest that multiple surgery would incrased the risk of local recurrence of GCT that will lead to pulmonary metastasis. |
| *Need English re-checking and correction*  | The author has re-checking and correction of English |  |
| *Line 9-10: Final summary/ message of the abstract has to be similiar with the final summary of article, please modify* | The author has corrected and modified final summary | Line 9-10: We suggest that multiple surgery would incrased the risk of local recurrence of GCT that will lead to pulmonary metastasisLine 87-88-89 :In summary, preventing local recurrence of GCT for minimizing pulmonary metastasis could be done by avoiding multiple surgery. We hope this report may have some value in understanding pulmonary metastasis of the GCT.  |
| **Keywords :** Suggestion to follow *MeSH (Medical subject headings)* | The author has changed the keyword | Line 11:Keywords: recurrent giant-cell tumor, gct proximal humerus, pulmonary metastasis.  |
| *Citation style is not following JKKI style* | Citation has corrected and following JKKI style |  |
| *Is patient infromed concent performed prior to publication of the case? give statement on that* | The patient had been informed for this case report. The author has put the statement on introduction | Line 22-23Informed consent has been taken from the patient for this publication. |
| *Is there similiar family history? Is patient smoker?* | No similar family history, yes patient is a smoker (had been added to patient profile) | Line 25-26:A 40 years old, smoker, male was referred to our orthopaedic outpatient clinic due to an increasing mass on his left shoulder |
| *Is x-ray prior to the first surgery at local hospital available?* | Non available |  |
| *What is the result of Histo-PA exam at the first surgery?* | Non available |  |
| *Figure 2...Both figure is same, choose one* | The author has choose one figure | Line 124 |
| *Figure 3..Choose only one or two figure that clearly represent the result of CT* | The author has choose one figure | Line 128 |
| *Figure 4..figure legends should be Figure 4A and 4B.* | The author has corrected and changed it into figure 4A and 4B | Line 131 and line 133 |
| *How was the status of chest x-ray prior to resection surgery? Please show the X-ray* | No mass or nodul on chest x-ray,,, the statement has been added to the manuscript | Line 135 |
| *Type of implant used for hemiarthroplasty should be described* | The author has corrected and described in the manuscript | Line 45-45-46:A shoulder hemiarthoplasty using Austin Moore prosthesis then performed. (Figure.4) The post operative biopsy result was Giant cell tumor with no sign of malignancy. |
| *What kind of “Local control procedure” performed during Surgical resection?*  | Kind of local control procedure performed is wide excision | Line 7-8:Wide excision and hemiarthroplasty of the shoulder was performed, however the tumor recurred. |
| *Is “Systemic control procedure” performed after the surgery?* | No systemic control procedure performed after the surgery |  |
| *How is the Histo-PA result after Resection and Hemiarthroplasty? Is there sign of malignant transformation? It was not mentioned* | The Histo-PA result was Giant Cell tumor recurrent, no sign of malignancy | Line 45-46:The post operative biopsy result was Giant cell tumor with no sign of malignancy. |
| *What kind of bacteria causing the infection?* | S. aureus | Line 48-49A culture result of S. Aureus was found and spesific antibiotic treatment was given for 2 weeks. |
| *Figure 5....Choose one or two figure that most represent the case* | The author has corrected and choosed one figure. | Line 137 |
| *Is Thoracal-CT performed to the patient to confirm the districution of Lung metastasis?* | The Thoracal CT scan was not performed |  |
| *How is the result of Histo-PA after Shoulder disarticulation? Malignant? not mentioned* | The Histo-PA was malignant GCT | Line 66:The post operative biopsy showed malignant GCT |
| *How is the final survivorship of the patient? How long is the follow-up?* | The patient dead 2 years after disarticulation due to loss of follow up and miss the chemotherapy in other hospital |  |
| *Need more discussion and references* | More discussion and refference has been added by the author | Line 77-81Other authors proposed that surgical manipulation could facilitate tumor migration, thereby promoting lung metastasis. The mechanism of metastasize in this benign lession was considered the same as malignant lession. The suggested mechanism are local vascular permeation and emboli formation that can be induced by multiple surgical manipulationLine 83-87:The patient had to undergone multiple operation because of the demand from the patient to keep his arm for social economic reason. The used of Austin Moore prostheses hip implant for the second operation due to the shoulder implant was not available in the goverment insurance coverage and the patient could not afford to pay for the shoulder implantLine 106:Rekha BY, Rao PY. Recurrent giant cell tumour in distal humerus: A Case report. Journal of Orthopaedic Case Reports. 2013; 3(3): 42-44Line 115:Nair GG, Supriya NK, Sathi PP. Benign giant cell tumor of bone with pulmonary metastasis- report of two cases and review of literature. Int J Res Med Sci. 2017. 5(3); 1131-1134 |
| *The first paragraph of Discussion section should be deleted..no need to repeat describing the case* | The author has corrected and deleted the first paragraph of discussion | Line 69-71:GCT is a benign, locally agressive, neoplasm with ability to recure and metastasize. The usual site for GCT is around the knee and away from the elbow. Proximal humerus is a rare site for GCT |
| *Give more discussion from the author opinion on what is the possible cause of reccurent of the GCT in the presented case. What is “the point of learning” of this case?* | The author has give more discussion and point of learning and suggest that possible cause of recurrent in this case is multiple surgery | Line 89-90:.....preventing local recurrence of GCT for minimizing pulmonary metastasis could be done by avoiding multiple surgery. We hope this report may have some value in understanding pulmonary metastasis of the GCT |
| *Is there any correlation of Infection on the reccurency of GCT in this case?* | The author found n supportive data on that |  |
| *What is the author suggestion for preventing local reccurency and/or metastasis of GCT?, you Give more information from the references on this issue.* | We suggest to avoid multiple surgery for GCT patient, other author suggest that local recurrent increasing the risk for pulmonary metastasis. We have mention the suggestion in summary. |  |
| *Not consistantly following JKKI reference style, please correct* | The author has corrected the reference following JKKI reference style. |  |