Author's response to reviews

Title: Solid Variant of Aneurysmal Bone Cyst of the Thoracic Spine: Case Report

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Author's response to reviews: see over
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Dear JMCR Editorial Team:

Thank you for your review of our manuscript “Solid Variant of Aneurysmal Bone Cyst of the Thoracic Spine: Case Report” (MS#1975326655354115).

We appreciate the opportunity to address the Editor’s and reviewers’ comments through the point-by-point response below.

Editor comments:
1. “Please structure the abstract into... three sections.”
   - We have re-structured the abstract to include an Introduction, Case Presentation, and Conclusion.
2. “Please remove keywords and running titles.”
   - We have removed keywords and running titles.
3. “Please include the ethnicity of the patient.”
   - We have now included the ethnicity of the patient in the case presentation section.
4. “Please include a conclusion section.”
   - We have now included a conclusion section.
5. “Explicitly (in their manuscript and response letter) why this article meets criteria for publication other than addressing a rare disorder.”
   - Because of its rarity, location, and radical treatment approach (versus simple curettage of the lesion), we found this case worthwhile to publish. The condition is difficult to diagnose radiologically before biopsy or surgery. Through our report, we hope to remind other physicians that the solid variant of aneurysmal bone cyst should be included in the differential diagnosis of any lytic expansile lesion of the spine, even though it is a destructive lesion, as opposed to malignant neoplasms of the bone. Solid variant ABC must be differentiated from malignant pathology such as osteosarcoma, as the treatment approach and need for adjuvant therapy are very different between the two disease processes. Whether an aggressive surgical approach results in a better outcome/recurrence rate than a more conservative one (e.g., curettage alone) remains to be seen in longer-term follow-up, and is the subject of future studies.

Review #1 comments:
6. “... give a short review of the literature on the complications of embolization. Is the risk really too high?”
   - Arterial embolization has been reported as effective either as an adjunct to surgery or as sole therapy. In the spine, arterial embolization was first used preoperatively to decrease vascularity and intraoperative hemorrhage. The response of aneurysmal bone cysts to embolization
has been involution of the soft-tissue component, sclerosis, and ossification. In some cases, the involution and ossification of the mass was so profound that surgery was avoided altogether. The literature (Shi et al.) suggests angiography and embolization can be performed without a significant risk of permanent neurologic deficit, skin, or muscle necrosis. However, in our case, the experienced interventional neuroradiologists deemed the risk higher than usual given the proximity of the feeding artery to the tumor and the anterior spinal artery, combined with the watershed location at T6.

- This brief review and discussion have been added to our manuscript.

7. “Why did the patient develop a pleural effusion?”
   - The patient developed a pleural effusion on the first postoperative day from violation of the parietal pleura intraoperatively. The effusion was likely from irritation of the pleura and postoperative oozing of fluid/blood from the operative bed directly into the pleural cavity. There was no hematoma and there were no signs of infection.

8. “... specify, recording pain/neurologic symptoms and patient’s satisfaction.”
   - The patient’s response of the surgery have now been added to the Case Presentation section. The patient was pain-free and neurologically intact at 16 months after surgery and has been satisfied with the surgery.

9. “... omit repeating these numbers [in the beginning of the discussion.”
   - This portion of the discussion has been deleted.

Reviewer#2 comments:

10. “... the discussion is too long.”
    - The discussion has been shortened.

11. “... rephrase, ‘young old’ is cumbersome.”
    - We have made the suggested correction.

12. “... rephrase suggest ‘significant neurological deficits’.”
    - We have made the suggested correction.

13. “... drop the hyphen, add the word ‘in’.”
    - We have made the suggested correction.

14. “Minor foci: of not or?”
    - We have made a clarification.

15. ‘nonneoplastic’ and ‘tumorlike’ should be hyphenated.”
    - We have made the suggested correction.

16. “... rephrase, ‘young old’ is cumbersome.”
    - We have made the suggested correction.

17. “What exactly is the purpose of this report?”
    - Because of its rarity, location, and radical treatment approach (versus simple curettage of the lesion), we found this case worthwhile to publish. The condition is difficult to diagnose radiologically before biopsy or surgery. Through our report, we hope to remind other physicians that the solid variant of aneurysmal bone cyst should be included in the differential diagnosis of any lytic expansile lesion of
the spine, even though it is a destructive lesion, as opposed to malignant neoplasms of the bone. Solid variant ABC must be differentiated from malignant pathology such as osteosarcoma, as the treatment approach and need for adjuvant therapy are very different between the two disease processes. Whether an aggressive surgical approach results in a better outcome/recurrence rate than a more conservative one (e.g., curettage alone) remains to be seen in longer-term follow-up, and is the subject of future studies.

18. “... rephrasing to ‘this tumor like lesion of the vertebral column’.”
   - We have made the suggested correction.

19. “Remove subheadings [in Case report].”
   - We have made the suggested correction.

20. “spell ‘One year’...”
   - We have made the suggested correction.

21. “… the reader [needs] to be sure you are talking about the post void residual volume of urine.”
   - We have made the suggested correction.

22. “Figure 1 is a computed tomogram rather than a topogram.”
   - We have made the suggested correction.

23. “Were fluid levels seen on the MRI to suggest a cystic nature to the lesion.”
   - Microcysts were seen on the MRI to suggest a cystic nature. We have added this description.

24. “How much was the preop kyphosis?”
   - There was 24 degrees of preop kyphosis measured by the method of Cobb from T5 to T12. This detail has been added to our case report.

25. “What technique did you use for correction of the kyphosis which caused a transient neurologic compromise?”
   - After the rods were placed on both sides, we began to gently compression across the pedicle screws at T5 and T7. This detail has been added to our case report.

26. “… reword.. morselised bone graft from the osteotomized lamina.”
   - We have made the suggested correction.

27. “was a pleural tear observed intraop?”
   - The parietal pleura was resected along with the tumor. There was no plane of separation between the pleura and tumor capsule. This detail has been added to our manuscript.

28. “What was the authors’ interpretation of ‘moderate kyphosis’?”
   - The normal values for thoracic kyphosis range from 10 to 20 degrees from T5 to T12. Postoperatively, our patient had a kyphosis of 34 degrees from T5 to T12. Therefore, we consider this moderate, especially since there was an increase in kyphosis in the postoperative period compared to preoperative period. This clarification has been added to our manuscript.

29. “A follow up of 6 months seems inadequate to me for a lesion of this nature...”
The surgery was performed in February 2009. Therefore, we now have 16 month follow-up. This detail has been added to our manuscript.

30. “Remove subheadings [in the Discussion section].”
   - We have made the suggested correction.

31. “Which other conditions (benign and malignant) can solid ABC be misdiagnosed...”
   - The pathological differential diagnosis includes solitary bone cyst, hemangioma, osteosarcoma, giant cell tumor, and chondroblastoma. This has been added to our manuscript.

32. “Were there any dilemmas surrounding the histopathological diagnosis of the present case?”
   - A firm diagnosis of solid variant ABC was made by our neuropathologists on review of the permanent sections of the biopsy. There was no ambiguity.

33. “your first sentence in this paragraph should be rethought.”
   - We have re-worded our first sentence.

34. “... unable to find a mention of reference no. 9 (Suzuki) in your list of references.”
   - Reference 9 has now been added.

Review#3 comment:
35. “The reference number 9 is not in the report.”
   - Reference 9 has now been added.

Please feel free to contact us again if there are any questions or comments regarding our revised manuscript. We enthusiastically look forward to hearing from the Editorial Team and Reviewers again soon.

Sincerely,
Andrew Jea MD
Corresponding Author