Reviewer's report

Title: Recurrent intracortical osteosarcoma - A case report with a long-term follow-up

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Reviewer: Hisham Shalaby

Which of the following following best describes what type of case report this is?: None

If other, please specify:

A presentation of a very rare variant of osteosarcoma that is not sufficiently reported in the literature.

Has the case been reported coherently?: No

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: No

Does the case report have explanatory value?: No

Does the case report have diagnostic value?: No

Will the case report make a difference to clinical practice?: No

Is the anonymity of the patient protected?: Yes

Comments to authors:

1. The Title should include the site of the tumour “Tibia” as the first mention of the site is in page 4 under heading case presentation. Also the Abstract has no mention of the site of the tumour.

2. Under “Case Presentation” – 2nd paragraph: The authors do not report the work-up done for this patient including chest radiographs, bone scans, MRI, blood tests, etc. Such work-up is important for the readers who attempt
management of similar cases. This is also in contradiction to the work-up done when recurrence occurred which is reported in details in paragraph 4

3. Under “Case Presentation” – 2nd paragraph: “After the biopsy result suggested low-grade malignancy lesion” – How was the biopsy done and planned and what type of biopsy?

4. Under “Case Presentation” – 2nd paragraph: “the patient underwent wide resection” – this appears to be a very vague description of the operative technique used. Why was a 14 cm excision attempted if the actual tumour size less than 4 cm and well circumscribed? Was this planned using the MRI scan? Was there any soft tissue element? Was the biopsy tract excised?

5. Under “Case Presentation” – 2nd paragraph: There was no chemotherapy given in the primary management of this tumour, although the pathology showed the diagnosis clearly. Why was this decision made, and what was the rational?

6. Under “Case Presentation” – 3rd paragraph: The reconstruction of the skeletal defect of 14 cm was managed by bone transport using an Ilizarov frame. Why bone transport when the defect is huge? The frame time of 15 month is a very long period that almost always lead to problems of pin site infection and frame stability issues as well as their impact on the patient psychology. Reconstruction for these very large defects is currently managed in most centres with vascularised fibular graft. Was this option explored?

7. Under “Case Presentation” – 3rd paragraph: “Three rings were applied at the proximal tibia, two rings above and one below the corticotomy site; and another was applied at the distal fragment to achieve stability” – The small distal fragment almost always dictate extension of the frame to the foot to achieve stability. If that was not done what was the fixation on the distal ring that allowed stability of a very small segment, very close to a mobile joint without docking problems.

8. Under “Case Presentation” – 3rd paragraph: “The patient finally was able to walk, with a normal range of motion in her ankle and knee” – A normal range of movement in the ankle and knee after 14 cm bone transport and transfixing the leg muscles for 15 month is an unrealistic statement that I have never witnessed in the best hands using circular frames. If this is true the authors should explain what was their wire placement technique / physio protocol that led to this achievement.

9. Under “Case Presentation” – 4th paragraph / Discussion: The authors report recurrence after 5 years of a tumour that was excised with a sufficient margin and which was originally low grade. What is the authors explanation for this? They have loosely pointed out that the lack of the original chemotherapy could be blamed. But then they report “50% necrosis area due to neo-adjuvant chemotherapy”. So the tumour is a bad responder to chemo. A good responder usually shows over 90 % necrosis. This is clearly in contradiction to their suggestion and does not explain why recurrence did not occur the next time.

I believe that the case report should present a clear message either regarding
the management or the follow-up and although the case is rare and interesting I think it lacks this clear massage.

The technique is reported with no details making its reproduction impossible and does not present a benefit to surgeons specialized in this type of reconstruction as they will be clearly interested in the details.

**Quality of written English:** Acceptable

**Declaration of competing interests:**

I declare that I have no competing interests.