Reviewer’s report

Title: Novel “double-strut” fibula ankle arthrodesis for large tumor-related bone defect of distal tibia

Version: 1 Date: 18 Jun 2019

Reviewer: John P Albright

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Is a case series describing a novel technique of bone grafting for distal tibial defects after resection of pathologic tissue from the distal tibia. There is a followed 9 cases using autograft fibula bridge the gap between the distal tibia intact and the ankle joint itself. Provided literature review past history dating back decades following up to Jesse Jupiter his description of a split fibular graft. The technique of the procedure he is well described in the details of each of the 9 cases is adequately covered. Follow-up demonstrated reasonable success using accepted functional outcome methods used for tumors and for ankle foot and ankle Society. Health is needed before correcting the but it is a manuscript that is easy to read.I really have only 2 additions that should be included in this report: 1) would be appropriate to discuss just inhibitors results and description of whether or not vascularity was achieved with his technique. 2) while reasonable success has been achieved with this procedure you are describing, the alternative must be put into perspective by adding references to the literature and a discussion that thoroughly covers the plus and minuses of below-knee amputation. My impression is that there is much less time loss and superior outcomes for patients agreeing to undergo amputation below the knee. Perspective I am sure that there are no patients with any sort of salvage procedure being done competed in track at the Olympic level or were found to be Skiing at the professional level. Furthermore, it took almost a year for these patients to recover from the operation. How long does the patient face for recovery from a BK amputation?. Specific comments: Page 2 #24 "internal fixation relaxation was developed in one case." This is not a term that this reviewer is familiar with please provide more detail about the meaning of the term "relaxation".Page 2 26 and 38 "... 8 patients achieve bony union" "at the final follow-up, 1 of them experienced a local recurrence" I assume this means that it is a 9 patients did achieve union but the one patient developed a recurrence of the tumor despite the success of the procedure.?"... In for (44%) patients developed lung metastases." In the discussion where the salvage technique is being compared to the B-K amputation must include the lifespan of these patients as well as the amount of time it took for the recovery to provide a quality of life comparison between your procedure as a salvage to amputation.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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