Reviewer’s report

Title: Correlating Pre-Operative MRI Measurements of Metatarsal Osteomyelitis with Surgical Clean Margins Reveals the Need for a One Centimeter Resection Margin

Version: 0 Date: 14 Jul 2017

Reviewer: Matthew Cichero

Reviewer's report:

1. Is the question posed by the authors well defined?

Background: This needs to be restructured rethought. It is not posing the question clearly enough - I have to wade through the whole section to get a feel for what the question is. The last paragraph needs to be the second paragraph, and improved on to explain why the authors chose to investigate this.

2. Are the methods appropriate and well described?

Overall I think the authors could improve explaining whether the clean sample was based on histopathology or microbiology results...it could be made clearer - its a little too ambiguous.

Line 112-113 - consider removing ’...and being agreeable and capable of receiving an MRI.’ The inclusion criteria clearly states that there needs to be 'confirmed metatarsal OM on MRI' therefore if they cant/don't want to have an MRI, this automatically excludes them from the study therefore you don't need to state this.

Line 125 'CBC, BMP and A1c' should really read 'Complete Blood Count (CBC), Basic Metabolic Panel (BMP) and HbA1c' given this is going to be published internationally - ESR is standard nomenclature internationally so shouldn't need clarifying/expanding

Authors don't seem to mention whether irrigation and new instrumentation is used between the first debridement and prior to 'clean margins' are taken. If the same instruments are being used, and there is no irrigation between the first debridement and taking 'clean margins', the results of the 'clean margin' risk being contaminated.

I can understand why margins were changed from 0.5 to 1 cm - this was an appropriate decision, but did they complete a full data set of the 0.5cm margin for all 21 patients? ie taking 2 x 0.5cm margins. This could be useful information to report if they have.

Paragraph starting Line 183 - If this study is to be repeated with greater numbers, post-operative outcomes would be very valuable to report on and provide more meaning clinically.
Line 192 - I'm not sure the reference to 'Microsoft' has been referenced correctly

Line 270 following '...to the level of OM' consider adding 'found on MRI investigations' or something to that effect.

3. Are the data sound?
   As this is a descriptive case series study, I think the data, figures and reporting are appropriate.

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
   They appear genuine

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

6. Are the discussion and conclusions well balanced and adequately supported by the data?
   Yes - this is well supported and backed up with literature.

7. Are limitations of the work clearly stated?
   Limitations were appropriately discussed but should be in the discussion section, not conclusion. I, and many others working in this field, would contend that a washout and clean instrumentation should be undertaken after first resection and before clean margins are taken.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Yes

9. Do the title and abstract accurately convey what has been found?
The title needs to be articulated better: eg 'Correlation of Osteomyelitis MRI findings with surgical 'Clean' bone margins - the need for a 1cm resection margin' or something to that effect

10. Is the writing acceptable?
Yes

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Not suitable for publication unless extensively edited

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