Author’s response to reviews

Title: The effectiveness of ultrasound in the detection of fractures in adults with suspected upper or lower limb injury: A Systematic Review and Subgroup Meta-Analysis

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Author’s response to reviews:

Reviewer 1:

1) Abstract: The key question of the authors has been whether ultrasound scan can show comparable results to traditional MRI-scan or CT-scan (please see the abstract). However, the authors have only reported results from different studies reporting specificity, sensitivity and NPV and PPV of ultrasound scan. Further in the conclusion of abstract is stated that "Ultrasonography demonstrates good diagnostic accuracy,,", Please define good (%) and accuracy. I have tried to find these definitions in the manuscript body without success.

Good diagnostic accuracy is defined in terms of objective markers as defined in the following sentence: 'The primary outcome extracted from the present review is diagnostic accuracy of sonography in the identification of fractures, which is objectively assessed and compared to gold standard imaging using measures of sensitivity, specificity, negative predictive value (NPV) and positive predictive value (PPV).'

2) The authors have registered their systematic review which is very well done. The authors have followed the PRISMA guideline which pretty much appreciated. However, the search string and key words and combination of keywords used in different search engines are not defined. I was for example unable to check the numbers given in the PRISMA flow chart.

The search string and keywords/combination of keywords are defined in Appendix A: Search Strategy

3) Method: The method section starts with objectives. Objectives belong to Introduction not the Method part. Eligibility criteria and inclusion and exclusion criteria are well defined in the table excessive words are unnecessary.
The 'Objectives' were moved to the Introduction as advised by the reviewer. The inclusion/exclusion criteria were trimmed down to minimise repetition with the table included in the manuscript.

4) Results: Too many subheadings makes it very difficult and makes the article awkward. I had difficulties to understand were the results are started. Please make clear definitions of each section. There You have presented your results in a table excessive words are unnecessary.

Subheadings were removed and the text in the results section was trimmed down per recommendations.

Reviewer 2:

1) Fat mass is not cited as a limitation in the application of sonography to the detection of musculoskeletal injuries in our study. This is supported by the literature, as the upper and lower limbs have a relatively lower density of fat mass when compared to the trunk. For this reason, it is an important limiting factor in the effectiveness of abdominal ultrasonography. However, in the extremities, sonography relies on its poor penetrance of bony cortices to detect any anatomical anomalies and aid in the diagnosis of bone fractures. Fat mass is relatively insignificant in this process.

2) The article focusses on the detection of bone fractures (as stated in the abstract).