Reviewer's report

Title: Are classifications of proximal radius fractures reproducible?

Version: 1 Date: 4 June 2009

Reviewer: Jack Anavian

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Major Compulsory Revisions:

1. In the conclusion section following the discussion, the authors should describe BOTH the Mason and Morrey systems as having overall satisfactory reliability when compared to the AO/ASIF system, with the Mason system being most reliable. This is in fact what their results show.

2. It is essential that the authors discuss the impact of these findings on the classification of proximal radius fractures in the clinical setting. How do these results correlate with the authors' criteria for what constitute an ideal classification system? Is a better system still needed? This is best discussed in the discussion or conclusion section.

3. In the discussion section, the authors should elaborate on the correlation seen between complexity of the classification system and the degree of intra- and interobserver concordances. The more complex the system, the less concordance seen. The authors should also elaborate on why they believe this to be the case. For example, the AO/ASIF is a more complex system that involves the proximal radius as well as associated ulnar and ligamentous injuries. These added variables will presumably have a negative impact on reproducibility.

Minor Essential Revisions:

Abstract:

1. The last sentence in the Methods paragraph should be omitted. This is best discussed and referenced in the Methods section of the manuscript and not the Abstract.

2. The end of the last sentence in the Results paragraph should read, "..., which showed poor concordance and the least reproducibility."

3. A brief conclusion paragraph should be inserted at the end of the abstract.

Introduction:

1. This section should be titled INTRODUCTION and not BACKGROUND.

2. Paragraph #3 should be moved to the end of paragraph #1 and paragraph #4 should be moved to the end of paragraph #2. This will make for better organization.

3. The 2nd sentence in paragraph #2 should read, "Therefore, proper
classification is essential in order to render the proper treatment."

4. In paragraph #6, the 1st sentence should read, "In 1997, Hotchkiss modified the Mason classification by correlating fracture type with the proper intervention."

5. In paragraph #7, the end of the 2nd sentence should read, "...serves as a basis for treatment and prognosis."

6. In paragraph #7, the last sentence should read, "While this system is the most comprehensive, its intra- and inter-observer reproducibility has shown to be limited."

7. Paragraph #8 that discusses what constitutes an ideal system should be revised to read better and references should be inserted where necessary.

Methods:
1. In paragraph #1, the end of the 1st sentence should read, "..., who were not evaluators of concordance."

2. In the last paragraph, references should be included for Fleiss et al. (end of 1st sentence) and Scott and Cohen (2nd sentence).

Results:
1. In the last paragraph, the end of the last sentence should read, "..., and these were larger than those for the other classifications and were satisfactory."

Discussion:
1. Paragraphs #2 and #3 both discuss the intra-observer reliability and therefore should be combined to one single paragraph.

2. In paragraph #2, the start of the 2nd sentence should read, "The broad variability in these results is probably due to..."

3. In paragraph #4, the word "conditioning" should be replaced with "learning curve that exists".

4. In paragraph #5, at the end of the 1st sentence, again the word "conditioning" should be replaced with "the learning curve".

5. In the last paragraph, the 1st sentence should read, "... this study was limited to assessment of the correlation between and within the observers, ...

Discretionary Revisions:

The authors should reference Marsh JL, et al. Fracture and dislocation classification compendium - 2007: Orthopaedic Trauma Association classification, database and outcomes committee. J Orthop Trauma 2007;21(10 Suppl):S1-S133. This includes a newly revised classification by the OTA and AO/ASIF. The authors in this supplement also discuss important principles behind fracture classification systems.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.