Reviewer's report

Title: Assessment of the normal and pathological alignment of the elbow in children using the trochleocapitellar index

Version: 1 Date: 7 June 2013

Reviewer: James Fitzsimmons

Reviewer's report:

This paper describes an interesting approach for assessing the normal of the elbow in children using any new perimeter the authors call the "trochleocapitellar index" (TCI). The authors conclude that the TCI is less dependent on the direct measurement of angles than other predictors of elbow alignment. The authors go on to recommend that, provided the TCI is within the normal range, there is no need for comparison with the contralateral elbow. They also propose that the TCI might serve as another and possibly more definitive predictor of physis alignment in supracondylar fractures of the elbow and assist accurate reduction achievement.

Major Compulsory Revisions

1. Although this method and the application of the TCI in clinical practice look promising, this study seems to lack the appropriate statistical comparisons for the validation of a new measurement method. Therefore, it is necessary for the authors to consult with a statistician regarding the most appropriate methods of analysis (e.g. Correlation coefficients, etc.) to test the hypotheses proposed in this paper.

Minor Essential Revisions

1. There are some minor spelling mistakes in the text of the paper. These need to be corrected.
2. The legend in Figure 3 do not provide enough detail with respect to what the reader should be looking at. The authors should describe him, and perhaps even indicate with arrows, which variants of the capitellar line are noteworthy.

- Discretionary Revisions

None

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
Yes, and I have assessed the statistics in my report.