

Reviewer's report

Title: A geometric analysis of hallux valgus: correlation with clinical assessment of severity

Version: 1 **Date:** 28 February 2009

Reviewer: Mark Gilheany

Reviewer's report:

Major Compulsory Revisions

1.ABSTRACT: There is no clearly defined research problem and outline of the rationale behind reporting on what are effectively two research projects (validation of a new clinical assessment tool and reliability of a new hallux valgus radiological measurement system).

2.BACKGROUND: As for the abstract no rationale/ definition of a research problem based on the literature is presented. This leaves the reader thinking - why are we bothering? Additionally a review of the literature in respect to reliability of current measurement techniques has not been presented. The failure to discuss other clinical scales such as the validated "Manchester scale" and provide a rationale for not adopting existing tools suggests that the literature review has not been comprehensive. This may be partially addressed if the dates for data collection are revealed (and provided in the text). Was data collected prior to the publication of validation of the Manchester scale?

3.METHODS: Was there ethics for this study? Inclusion/ exclusion criteria are not discussed this is of concern in particular for the "control" group.

4.Angular Measurements:

a. The patient positioning for the radiographs does not appear to have utilised a standardised approach.

b. What measures were taken to ensure that the digital photography was standardised?

c. The authors quote several sources for the measurement techniques and it is unclear what components of these different techniques was actually utilised in the study. It would be helpful if the authors provided a table which summarises the various techniques from the quoted literature and the actual technique they have employed in this study. Some inaccuracies in reporting the literature may then be cleared up also.

d. The authors acknowledge that measures of DMAA and PPAA are unreliable they should therefore either remove these measures or provide an argument for inclusion.

5.Perpendicular Bisectors of the Longitudinal Axes of the First Metatarsal and Proximal Phalanx:

a. It is not made clear where the line should originate on the shaft of the phalanx and metatarsal

6. Clinical assessment of hallux valgus severity:

a. As mentioned above what measures were taken to standardise digital photography

b. "Masked" should be "blinded"

7. STATISTICAL ANALYSIS:

a. The editors if publishing this paper should have the statistics section reviewed separately. After the research aim and design is improved as indicated in the suggestions for major change.

8. RESULTS AND DISCUSSION:

a. These sections should be separated.

b. No discussion or presentation of the results from the control group is presented.

Minor Essential Revisions

I feel that the major revisions will alter the paper so significantly that further input can be provided after this is complete.

Discretionary Revisions

As for minor essential revisions

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.