Reviewer's report

Title: Testing the proficiency in distinguishing locations with elevated plantar pressure within professional groups of foot therapists.

Version: 2 Date: 8 May 2006

Reviewer: Margaret Wan Nar Wong

Reviewer's report:

General
This paper seems to be written with data collected during the same study on 'Comparison of foot orthosis made by podiatrists, pedorthists and orthotists regarding plantar pressure reduction in Netherland', which has been published in BMC in 2005. The introduction and methodology parts closely simulates the previous publication.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. There is major doubt on the validity of comparing clinical foot examination with pedobarographic measurements:
   a. Physical examination is most useful in detecting structural abnormalities and bony prominences associated with focal high pressure areas. The dynamic plantar pressure measurement measured by the pedobarograph detects contact force/area. As they detect different things, the comparison may not be a valid comparison. The absolute plantar pressure could be elevated to beyond 700 kPa without foot structural abnormality and bony prominence.
   b. The professionals 'were asked to identify locations with excessively high plantar pressure': Were the professionals told that they need to detect locations with pressure increase over 700 KPa? Or that the criteria was areas at risk of ulcerations? If not, the threshold for detecting 'locations with excessively high plantar pressure' by the professionals may not correspond to that set by the investigators for the pressure platform. The subsequent comparison would not be a fair comparison, and the results and conclusion drawn would be misleading.

2. The statistical analysis need to be reviewed by a statistician for validity.

3. Figure 1: Not necessary.

4. Figure 2,3,4: Gives little information except to illustrate the highly variable results, which has been mentioned in text. It would be much more useful and informative to the readers to replace with a table/ chart illustrate the 'clinically high pressure area' detected by the three groups vs the GS high pressure areas.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Metatarsalgia is actually a very non-specific diagnosis. It would be better if a specific diagnosis can be stated, especially ones that can account for the pressure increase. Otherwise the three patients could be having very heterogeneous conditions.

2. The median professional experience differs to a large extent among the
three groups, which may affect the results obtained. Please include the range of experience in methodology.

3. Specific training on detection of high plantar pressure areas by the professionals would be relevant information to be include.

4. Discussion line 2: 'the proportions ? Based on'. Something missing?

5. Table 3: There is a discrepancy between the table legend and the contents. It is uncertain whether the rations stated are with respect to the GS or not.

6. The manuscript would benefit from a overall editing.

Discretionary Revisions (which the author can choose to ignore)

1. In Results: 'sometimes one can see an underestimation.....and most of the time an overestimation....': The actual false positive/ false negative rates, and positive/ negative predictive values would be useful.

2. It is interesting to note that the peak bear foot plantar pressure in this study as stated in table 2 differs dramatically from baseline in shoe peak pressure presented in 'Comparison of foot orthosis made by podiatrists, pedorthist and orthotists regarding plantar pressure reduction in Netherland' table 2. It is understood that barefoot plantar pressure measured would be different from those taken in shoes. However, the pressure distribution pattern is not expected to change excessively, unless there is an insole in situ. The authors may need to think about what accounts for the dramatic change. Though this is not strictly a review question on this paper, it may bear significant implications on the validity of the study, and is worth some detailed examination.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes

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