Author's response to reviews

Title: Reliability of lumbar spinal palpation, range of motion and determination of position

Authors:

  Michael Troke (M.troke@yorksj.ac.uk)
  Dale Schuit (Dale.Schuit@rosalindfranklin.edu)
  Cheryl M Petersen (Cheryl.Petersen@cuw.edu)

Version: 2 Date: 15 June 2007

Author's response to reviews: see over
Responses to Reviewers’ Comments

We found the comments most helpful in approaching the paper from different perspectives. The reviewers have enabled improvements in the paper.

Kim Humphreys’ Comments:

Major:
1. The actual palpation markings were blinded because of the subject position in side lying, as described. Operators were told to ignore each other, on the basis that, at that time in the study, no one knew who might be right. The discussion acknowledges what we did, with the best safeguards, within the constraints which inevitably applied. The revised text hopefully clarifies this better.

2. The side lying posture facilitates comfortable repose by the subject and facilitates muscle relaxation, avoiding stretching relevant muscles and ligaments (eg hamstrings or paraspinal muscles) which could happen in other postures. We believe it is valid for level palpation. Centering and cross checking with other bony landmarks needs to be done in standing of course. The side lying position has been used throughout the previous work with the modified instrument, as cited in this paper. During earlier validity studies, all the palpation was cross checked using a radio opaque marker and all but one (of 20) were found to be accurate. Again, the revised text will hopefully clarify sufficiently.

Minor:
1. Addressed by deletion
2. Moved
3. See revised text. The subject number was based on previous reliability and validity work in which, in view of the highly reliable instrument, cohorts of this magnitude have been found to be sufficient.
4. See revised text, and comment above.
5. This was done in order to be consistent with the earlier reliability work.
6. DALE & CHERYL: I don’t have a figure in my version…should there be one?
Veronique Feipel’s comments:

1. Addressed in revisions to tables
2. Addressed in revisions to tables.
3. Previous papers refer and the system has been used extensively in pilot studies in UK. Statement deleted anyway in revised text.
4. See Humphreys comment above.
5. Again, the protocol followed was based on previous reliability work as cited.
6. We did not plan to measure neutral position, only to see if the modified instrument would produce reliable measures of position. This in order to see if the instrument had potential use in this manner. This is an aspect which it is now open for us, or other authors, to test more fully in the future.
7. The intention was to quantify upright repositioning error. See revised text.
8. Clarified in revised text.
9. DALE CHERYL: Still not clear how we can address this point. Any suggestions? A sentence has been added to the text to describe our determination of excellent agreement of the palpation marks in 19 of the 22 subjects.
10. This looks like a misunderstanding. Revised text addresses and clarifies.
11. Revised text addresses and clarifies.
12. SDs were calculated separately from all the data, not samples or means.
13. Addressed by revisions in text.
15. DALE CHERYL: Again, I don’t have a Figure……
16. The instrument was zeroed on several occasions as a precaution against cumulative error and based upon the earlier (cited) reliability work. Understood to be good practice with instrumentation in engineering circles