General

The three-dimensional easy morphological (3-DEMO) classification of scoliosis - Part II. Repeatability, is the second paper of a trilogy written by the same group of authors.

Using an optoelectronic system (AUSCAN), they acquired the data of 100 pathological and 20 normal spines and of two dummies with simulated spine deformity. On the obtained 3D reconstruction of the spine, they considered the coronal (Top) view with a spinal reference system and its three related parameters, defined in the first paper, constituting the 3-DEMO classification. They calculated the repeatability coefficient for the subjects and evaluated the system measurement error calculating the standard deviation of 50 consecutive acquisitions for each dummy. This study reports that the main part of parameters variability was due to postural adjustments and it was possible to define classification limits from the repeatability analysis. Also the AUSCAN System systematic error is very low, while the 3-DEMO classification has a high repeatability.

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

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

This paper is a typical study on methodology and therefore it would be useful for the reader to have some more information on the methodology used and not only the reference of Bland and Altman method, Lancet 1986, 1(8476): 307-310.

It is also useful to discuss the existence or not of any other assessment method for the reliability of similar measurements.

Table 1 gives the patients’ radiographic characteristics and describes, Proximal angle, Distal angle and Third curve angle. Please define what is this angle, for example Cobb or any other angle and in what increments it is measured. In Material and methods the nature of angle that the system measures must be clearly defined.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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