Reviewer’s report

Title: Three-dimensional easy morphological (3-DEMO) classification of scoliosis. Part I

Version: 5 Date: 23 November 2006

Reviewer: Manuel Rigo

Reviewer’s report:

General

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

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Discretionary Revisions (which the author can choose to ignore)
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The authors have corrected the unclear concepts of global and spinal coordinate systems. Now it is clear and right according to the SRS nomenclature committee. Also the pictures are better as well as the two last sections, discussion and conclusion.

Just a comment about the name given to the classification. Although the parameters 'direction', 'shift' and 'phase' are easy to understand from the clinical point of view, this is just true for specialists. Thus, even the concept is simple, the definition makes it necessarily more complicate, not so easy to understand for non specialists. To use the term easy in the nomination and to insist on this aspect during the discussion may be is a abusive.

This reviewer find a little bit strange that a population attending a clinic for scoliosis treatment is 16.3 (12-29) years of age. Most of the scoliosis populations reported in clinical studies for treatment evaluation are younger than this. Did they attend the clinic to receive first treatment?, in other words, is the population formed by untreated patients. I do not think that to take untreated or already treated patients would make this study different at all but may be would be useful for the readers to know about it.

In the discussion section, the authors afirm that there is no a correspondance between 'shift' and spinal imbalance at C7. I agree on this point but i disagree when the authors say it is no other parameter in the literature to be compared with the 'shift' concept as defined in the 3-DEMO. For example, although it has not been published, the location of the radiological 'transitional point' between the thoracic curve and the lumbar or thoracolumbar curve in relation with the Central Sacral Line could correlate with 'shift'. Also the 'shift' of the rib cage in relation with the pelvis as measured also in the x-Rays could correlate (and this is a parameter which I have seen in some old publications of the eighties). There are other parameters in the literature which could correlate with the 3-DEMO shift, like the shift of the stable vertebra 'SS'.

What next?: Accept after discretionary revisions

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.