Reviewer’s report

Title: The vertebral body growth plate in scoliosis: A primary disturbance of growth?

Version: 1 Date: 17 October 2007

Reviewer: Peter Dangerfield

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General
I like this new approach of looking at the vertebral body growth plates using MRI in patients with IS, CS and other conditions. This is innovative and of value to readers.

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

The linking of growth plate abnormalities to wedging, and the relationship between MRI and histological abnormalities is undertaken but the small size of the sample raises the question of whether this is really proven in the present text. The isolated findings of Schmorl’s nodes in several cases is strange and not really addressed enough in the discussion. The unusual abnormality of columns of chondrocytes on the convex side of a curve also needs explanation. The comments on growth also need explanation since it is not clear whether this study had tall or average size subjects. Where they tall with IS? The authors should address these points but a deeper level of discussion.

The methodology fails to make it clear which series is which, whether the same subjects had MRI and then growth plate biopsy analysis. There is an interesting finding relating to the graphs of Series 1 which show high deficiencies ascending and descending from the apex. Can the authors explain what this signifies?

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.