Reviewer's report

Title: "Brace Technology" Thematic Series - The Lyon brace in the treatment of scoliosis

Version: 1 Date: 11 December 2010

Reviewer: Tomasz Kotwicki

Reviewer's report:

The paper presents the long term outcome of as many as 1338 patients treated by the same physician with the same method. It is a remarkable work of Dr Jean Claude de Maurroy and the team from Lyon. Summarizing the immense experience is of great value to the readers of Scoliosis Journal. I strongly recommend publication of this paper.

The methodology is correct. The SRS inclusion criteria (25-40 degrees, Risser 0-2, max 1 year postmenarchial) are not strictly respected. It is understandable because the SRS publication (Richards et al 2005) took place far after the Lyon team began conservative scoliosis treatment. Nevertheless, keeping this paper as it is, I would advice to the authors to prepare in the future another paper, following the currently recommended criteria (20-24 degrees included only with proven radiological progression, drop-outs counted as failures of therapy – worst case analysis, exclusion of the curves having previous treatment etc.). Such an analysis will allow to localize the Lyon protocol and the Lyon results within the whole spectrum of the outcomes of all European methods of conservative scoliosis treatment.

The strong point of the paper is also applying the Lenke classification in brace prescription.

Major revisions – there are no major revisions to be done
Minor revisions – there is no minor revisions to be done

Discretionary revisions:

Page 6, line 7: chondrocostal concave counter push - should probably be convex not concave.

Page 7 line 6: concave should be replaced by convex

In fact, the authors probably use the word concave according to the main thoracic curvature side (right convex and left concave when seen from the back). However, it is not logical and misleading for a reader to read about pushing on concavities. Pushing is to be made over convexities, in this particular case the push is addressed to the convex anterior chondrocostal arch at the left side. Please make your description clear.

Page 6, line 13: when he is wearing the brace – please replace with: when wearing the brace.
Conclusions: the brace is a complement to other braces – in fact, this brace is an alternative to other braces.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interest.