Reviewer's report

Title: Rigid braces can replace casts in the first correction of adolescent idiopathic scoliosis. A controlled prospective cohort study on the Sforzesco brace versus Risser cast

Version: 1 Date: 28 September 2008

Reviewer: Elias Vasiliadis

Reviewer's report:

- Major Compulsory Revisions

The present study tries to verify if it is possible to substitute the Risser cast in the corrective phase of AIS treatment with a rigid brace such as the Sforzesco brace. I agree with the authors that there is no evidence in the literature supporting the substitution of Risser cast with a rigid brace, but such a question has already been answered by most physicians in everyday practice and rigid casts are not currently used, because “…the preparation of casts is complex, time-consuming and costly (in-patient treatment, hand-made by physicians) and it has a high impact on the patient’s quality of life...” as the authors are stating in the Background section. Furthermore rigid casts might have side effects such as cast syndrome or skin problems.

I suggest that the authors should focus only to the initial correction they can achieve with the Sforzesco brace and correlate those with the final results. I also suggest omitting the Risser cast group, whose interest is only historical. Comparison of the results between Sforzesco brace and Risser cast is of no clinical significance and as far as I can understand from the manuscript the authors have stopped using Risser cast even in their centre. Outcome criteria which are used in the present study are very important and I am expecting the initial and final results of Sforzesco brace with great interest.

- Minor Essential Revisions

1. Background section, paragraph 1: Interpretation of reference 16 regarding SRS website is incorrect. SRS recommends casts for very young children and not for adolescents.

2. Material section, paragraph ‘population’: The children who were studied have severe curves and are already candidates for surgical treatment. The fact that they have refused fusion does not classify them into curves that can effectively be treated conservatively. They are rather skeletally mature and 36 out of 40 girls are 1.6 years post-menarche and therefore brace and/or cast treatment might have no indication. But even if they were treated conservatively, early results are of no interest at this age group, unless they are correlated with final results.

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.

**Declaration of competing interests:**

'I declare that I have no competing interests'