Reviewer’s report

Title: Curve progression after long term brace treatment in adolescent idiopathic scoliosis: comparative results between over and under 30 Cobb degrees. SOSORT 2017 Award Winner.

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Reviewer: Jean Claude De Mauroy

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The authors should be thanked for these long-term results of conservative orthopedic treatment with PASB or Lyon brace. Indeed all braces are not identical and the rigor in the treatment is a guarantee of outcome.

In addition, the natural course of untreated scoliosis should be emphasized, and I advise the authors to cite Bjerkreim (Ingjald Bjerkreim & Ibrahim Hassan (1982) Progression in Untreated Idiopathic Scoliosis After end of Growth, Acta Orthopedica Scandinavica, 53: 6, 897- 900) Conclusions are clear and statistically significant: Double curve below 40°: 0.6°/an and after 20 years: 0.5°/year. Between 40°-60°: 1.5°/an. For Single curve: below 40°: 0.9°/an after 20 years: 0.5°/year and between 40°- 60°: 2°/year.

Tan's article (20) is interesting because he suggests an initial Cobb angle of 25 degrees as an important threshold magnitude for long-term curve progression.

The reason for this stability can also be discussed. The rigorous conservative orthopedic treatment stiffens the curvature. However, we know that, in adulthood, the curvatures of more than 70° are less progressive due to the rigidity.

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