Reviewer’s report


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**Reviewer:** Jean Claude De Mauroy

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The contested conclusion is: "patients treated with RCOs were substantially less likely to progress to spinal surgery than those treated with Boston-style TLSOs"

The authors suggest that the surgical indications differ according to the brace used.

Cobb angulation greater than 45° can remain stable without surgery. Conversely, an imbalance of the spine, a high rotation, a flat back may justify the discontinuation of the conservative treatment and a surgical orientation between 40° and 45°.

All results are in favor of the asymmetrical RCO brace, which is logical, since it is the only way to allow hyper-correction.

115-16 "have a significant lower rate of spinal surgery" is not the same as "were substantially less likely to progress to spinal surgery" The sentence "have a significant lower rate of spinal surgery" does not exist in the text of Minsk.

120-22 "The generally agreed indication for surgery in adolescents idiopathic scoliosis is curve progression to a Cobb angle of 45° to 50°"

Weinstein confirms risk of average progression of 1° per year after skeletal maturity for scoliosis between 40°-50° at skeletal maturity.

Lonstein ends his discussion on natural history and progression by commenting that "the cosmetic aspect of scoliosis must be borne in mind and should not be minimized"

Lebel confirms the importance of the sagittal plane and notes with EOS system that delordosis is -13.3% in Boston and only -6.6% in TLSO Chêneau.

132-34 "These differences in curve magnitudes and surgically treated patients suggest a selection bias in surgical candidates."
Such a sentence would mean that only the Cobb angulation is a surgical criterion.

The conclusion does not mislead the reader: "Future studies should examine differences in outcomes by brace type in other settings and in larger samples, and they should investigate the impact of the rotational dimension of correction with RCOs."

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