Reviewer's report

Title: Conservative treatment of idiopathic scoliosis according to FITS concept: presentation of the method and preliminary radiological and clinical results respecting SOSORT and SRS criteria.

Version: 1 Date: 27 April 2011

Reviewer: Manuel Rigo

Reviewer's report:

This is a very interesting scientific paper reporting reports after physiotherapy treatment from one of the specific methods created in Poland. Not so many papers on this issue so, although the design, retrospective cohort comparing results with natural history, is of low quality evidence, it is still welcome considering the current 'state of the art'.

I am still suggesting some changes in order to improve the paper:

Major Compulsory Revisions:

In the introduction section it should be explained about the current degree of evidence for studies reporting about physiotherapy treatment outcome. It would be welcome an explanation from the authors about the reason to publish another paper reporting outcomes from a retrospective series comparing incidence of progression with natural history. The authors, more or less already do it when using SRS and SOSORT recommendations in sample's selection but in my opinion it could be more clearly stated.

The incidence of progression in the group with double curve pattern is not so far from the reported figure (23%) in the Lonstein study. It is only when combined with the lower incidence of progression in cases with single curve that the total incidence is clearly less than that observed in the natural history. I think this point should be discussed in more detail in the discussion section, also looking at the distribution of curve patterns in Lonstein study. An better interpretation about this apparently so different response to the treatment would be welcome.

When looking at this results in a population with a so low initial Cobb angle it would be important to look at the incidence of cases from such a populations that finally go into progression reaching scoliosis over 30° or 35° or even more reaching surgical values. The question here is not to look only about absolute progression, when this absolute progression could mean nothing from the clinical point of view. Other series on natural history could help in this discussion. Which is the clinical relevance of an absolute progression, for example from 16° to 22° as a final result?. This is a radiological significant change but what it means from the clinical/medical point of view?. Which is the relevance of reaching maturity for example with a scoliosis measuring 16° instead of measuring 22°. In other words, it would be necessary to discuss about statistical and clinical relevance of this
results, giving at the same time some arguments to explain why this treatment should not be considered an over-treatment.

Discretionary revisions

I would suggest the authors to avoid terms like 'important scoliosis' and use terms like 'high moderate; low moderate; mild...etc'

When describing the technique itself, talking about derotation by using breathing mechanics, it would be interesting to tell about some precedents of this type of technique. For example this technique of breathing has been used by Schroth since 1921 (so it is not new) and it has been described in many papers, some in publications like Spine (Weiss HR 1991)

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**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