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: 1 May 2011

Reviewer: Fabio Zaina

Reviewer’s report:

The topic of this paper, FITS treatment for scoliosis is very interesting. Nevertheless, there are too many methodological flaws that must be corrected.

Major compulsory revisions:

The author states the study was conducted according to SRS criteria. According to these criteria only curves between 25 and 40° can be included. The author included also patients with curves inferior to 25°. So there is a contradiction. There are two different populations included in the present study: 10-25° and 26°-40°, being the first treated only with FITS exercise and the latter also with brace. My suggestion is to split the study into 2 different, as they actually are. Otherwise the paper will be very difficult to read. Moreover, in the braced group, the efficacy cannot rely only of FITS, but also and principally on braces. So this is not a prove of efficacy of FITS alone, but of a combined therapy. This must be highlighted.

Also SOSORT criteria deal with brace treatment management, so in the study in the group 10-25° they cannot be applied.

It would be useful for the reader to have more information about the management of the brace treatment. We only know that the brace was worn 13 to 21 hours per day. Does this refer to the initial prescribed dosage? Can the author provide more details about the brace protocol?

Only 26 patients completed the treatment, being the majority still under treatment. I suggest to state in the methods and in the objective of the study that this paper aimed to evaluate preliminary results after 2 years of treatment, then reporting also data from the subgroup of patients with final results (at present time final results of those 26 patients are not presented). This is relevant for both braced and not braced group, but most of all is relevant to respect the SRS outcome criteria, that are the number of patients worsened more than 5°, the number of patients over 45° at the end of treatment, and number of patients fused within 2 years from the end of treatment. If the author doesn’t reach the end of treatment the use of SRS criteria is useless.

In the discussion the authors compare the results to those of the natural history by Loinstein and Carlson. It must be noted the population of the latter study goes from 5 to 29° initially, so comparison cannot be so precise, and this must be
What happened to those patients who started with exercise alone and worsened? Did they passed to the brace group?

Another weak point is the lack of a control group. A possible solution for this could be comparing patients treated according to SOSORT criteria with patients treated without respecting them. The author excluded more than 200 patients from her database, I think she could collect many subjects for control. Of course the comparison with literature data is fundamental.

The first part describing largely the method is too long. I suggest the author to shortly summarize it (I think half a page can me more than enough), and eventually add the present text as an appendix at the end of the paper. Usually readers want to go to the core of a paper, and a too long paper can reduce the number of readers.

Level of interest: An article of importance 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 interests