Reviewer’s report

Title: Radiographic outcome of surgical treatment of adolescent idiopathic scoliosis in males versus females

Version: 2 Date: 27 July 2008

Reviewer: Tomasz Kotwicki

Reviewer’s report:

In general, the paper is suitable for publication in Scoliosis after some modifications are done.

The studies comparing male and female patients with surgically treated scoliosis are not frequent. This study adds new data to the issue.

The paper presents an analysis of an original material of scoliosis surgery covering 10 years of activity of one orthopedic department. There is a sufficient follow-up period.

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Major compulsory revisions

1. The major concern is to have mixed the different surgical procedures: (1) isolated posterior instrumentation/fusion with (2) combined anterior liberation/fusion with posterior instrumentation/fusion. It is not clear whether in the matched groups there were any anterior surgeries and how many.

2. All the curves fulfilled King’s criteria for thoracic structural scoliosis which means that the single thoraco-lumbar curves as well as the single lumbar curves were probably excluded from the analysis. Please clarify.

3. The proportion female/male in this study was 3/1. It is often reported as 10/1 in the literature. How the authors explain so high percentage of male patients undergoing surgery for scoliosis?

4. In the section “Authors contribution” it would be nice to know the contribution of each author in creating this article, not in managing the patients. Please use “data collection, data analysis, manuscript revision” etc. If the surgeon has not participated in creating the paper, he can be just acknowledged in the “Acknowledgement” section.

5. Abstract/conclusion: the first sentence (“male have the same curve pattern”) is neither supported by the Results nor mentioned in Methods.

6. In Abstract, last sentence and in Discussion, last sentence, please change “…the outcome of surgical treatment...” to “…the radiological outcome of surgical treatment…”, because there is no data on the functional outcome, rib hump size,
patient’s satisfaction or the quality of life.

Minor essential revisions

7. In Background/first sentence it would be more precise to write that AIS is a three-dimensional deformity and not a lateral curvature.

8. In Background, second sentence, please do not report on “10 degrees or less”, as scoliosis cannot be diagnosed at less than 10 degrees, according to SRS criteria.

9. In Background, second paragraph, last sentence: “only after Risser 5” please change to “only at Risser 5” because there is nothing more “after” Risser 5.

10. In Methods, second sentence, “Zielke device or…” please complete. Do you mean anterior instrumentation for “other systems”?

Discretionary revisions

11. No information is given whether the therapeutic approach has considerably changed within these 10 years or not.

12. It would be advantageous for a non-surgeon reader to see clinical/radiological pictures of a representative case of each group.

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.