Reviewer’s report

Title: Is vertebral rotation correction maintained after thoracoscopic anterior scoliosis surgery? A low dose computed tomography study

Version: 1 Date: 29 Jan 2017

Reviewer: Ian Stokes

Reviewer’s report:

This revised paper provides a technically thorough report of radiographic findings at two post-operative intervals (6 and 24 months) after anterior spinal fusions for idiopathic scoliosis. There is no statement of hypotheses or expected findings, but the body of the manuscript, especially the Discussion, alludes to two important questions: (1) is there reduced correction of vertebral rotation over time (2) is there a relationship between changes in Cobb angle changes and vertebral rotations and rib cage rotation in the axial plane. Also, it appears that the authors hold some expectation that anterior fusion is preferable to posterior fusion in terms of controlling rotation components. In this context, although the Introduction is revised and shortened, the motivation and objectives of the present study remain unclear relative to existing knowledge. The term 'rib hump' is mentioned 23 times, and they report scoliometer measurements, though the title and abstract do not mention this aspect. Therefore it is recommended that the abstract, purpose, results and discussion be rewritten to clarify the authors' intentions for the study, and the findings relative to the questions and prior knowledge they are addressing.

Page 4, line 15: The authors should state briefly why only 40 of the 230 patients were recruited, presumably related to availability of CT scans?

The following articles appear pertinent to the present article:

(1) Xiong B, Sevastik B, Willers U, Sevastik J, Hedlund R. Structural vertebral changes in the horizontal plane in idiopathic scoliosis and the long-term corrective effect of spine instrumentation. Eur Spine J. 1995;4(1):11-4. "The results of this longitudinal study suggest that the structural changes of the apical vertebra regress 2 years or more after CD instrumentation."


"Any, usually minor, deterioration occurred in the first six months postoperatively, and there was no significant further deterioration in 19 patients assessed over two years after surgery. Cotrel-Dubousset instrumentation can produce a significant correction of vertebral rotation and of the associated rib hump deformity."
Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

'I declare that I have no competing interests'

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal