Reviewer's report

Title: Evaluation of Implant Loosening Following Segmental Pedicle Screw Fixation in Adolescent Idiopathic Scoliosis: A 2 Year Follow-up with Low-Dose CT

Version: 2  Date: 30 April 2014

Reviewer: Toru Maruyama

Reviewer's report:

I enjoyed reading the manuscript regarding the screw loosening after surgery for AIS. One third of the patients had screw loosening and 1/5 of them were symptomatic. In my impression, symptomatic screw loosening is deeply related to the existence of pseudoarthrosis. Although the authors cited articles about degenerative lumbar spondylolisthesis [10] and described that successful bone fusion has previously been shown to be unrelated to the clinical outcome, it will be not the case for surgery for adolescence.

Discretionary Revisions
The relationship between the screw loosening and the pseudoarthrosis (and pain) should be investigated at the next opportunity.

Minor Essential Revisions
How do the authors define suboptimal screw placement or screw misplacement?

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.