Reviewer’s report

Title: Relationship between bone density and bone metabolism in adolescent idiopathic scoliosis

Version: 1
Date: 21 September 2014

Reviewer: Jack Cheng

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Reviewer comments – Need Major Revisions

1. Introduction and Background – too brief, need to expand on the relevant background leading to the study – the hypothesis, research question, objectives…….

2. In the subjects and methods – it was mentioned that 67 consecutive AIS patients were seen. The actual number studied was 55 with 8 male and 47 females. Since it is well known that the bone turnover markers were different between boys and girls, it would be more logically to confine the study and analysis to the majority of 47 girls.

3. The cohort studied were quite heterogeneous ranging from mild to moderate and severe cases undergoing surgical treatment. 7 surgical cases was included in this study one year post-operatively with the assumption that the BMD and bone turnover markers would be stabilised. This assumption may be difficult to substantiate. Might consider to take away these 7 cases and just focus on the other 40 girls without surgery to make the study more comparable.

4. It is well known that DXA measurement of the lumbar spine would be significantly affected by the rotation of the spine in AIS and thus the 2D projectional area which will affect the accuracy of the measurements – this should be acknowledged and thus the analysis should be focused more on the femoral neck measurements.

Level of interest: An article whose findings are important to those with closely related research interests

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'