Reviewer's report

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

Version: 1  Date: 20 November 2014

Reviewer: James Ogilvie

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Minor revisions:

The age of menarche onset should be defined. It usually occurs as the percentage of body fat reaches a certain amount, hence extreme female athletes are often hypo-estrogenemic or have delayed menarche. Most gynecologists agree that menarche cannot be declared until there have been 12 regular menstrual cycles or at a minimum 6. Adding a correlation of BMI with the onset of menarche may be of interest.

Because adolescent idiopathic scoliosis is polygenetic, many metabolic pathways are involved. Some may be causative and some may be associated but not causative. The authors should not imply a causative relationship between AIS and decreased bone mass unless their data supports this. The pathogenesis of AIS involves forces that create an asymmetrical disc initially and only later do adaptive changes in bone occur. The changes noted may be ethnicity specific since the same genetic markers in Caucasian AIS are not the same as Japanese.

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.

Declaration of competing interests: No conflict of interest.