Reviewer's report

Title: High molecular weight adiponectin and anthropometric variables among elementary schoolchildren: a population-based cross-sectional study in Japan

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Reviewer: Abel López-Bermejo

Reviewer's report:

The article by Ochiai H et al. on the association of HMW-adiponectin with anthropometric parameters is Japanese children is of some interest. Some issues, however, should be addressed by the authors:

Major:
- This study seems not to be driven by a pre-specified hypothesis: no hypothesis is given in the manuscript.
- The introduction is misleading: the paper is introduced by a description of metabolic syndrome, but metabolic syndrome was not assessed at all in this paper.
- No multivariate analyses are used in this paper, other than stratification by gender and obesity.
- The number of subjects in the obesity groups is indeed very low, especially for a study investigating differences in the association of HMW-adiponectin with anthropometric parameters in obese vs. non-obese subjects. In this sense, the differences in correlation coefficients between groups of subjects cannot be proven with such unequal group sizes.

Minor:
- A brief description of the recruitment of subjects is desirable. Please show in the abstract the number of subjects included in the study.
- The first paragraph in the results section should be moved to the methods section.
- Citation to reference 21 in page 15 is misleading, as it does not refer to children. Similarly, citations to references 26 and 27 in page 16 do no refer to children.
- First paragraph in page 17 should be mentioned also in the methods section.
- Girls have higher fat mass than boy at this age range. Could this be different in the Japanese population?
Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.