Reviewer's report

Title: Intima-media thickness and arterial function in obese and non-obese children

Version: 2 Date: 5 October 2015

Reviewer: Francesca Seta

Reviewer's report:

This is a clinically relevant study, which suggests that arterial stiffness could be used as an early biomarker to detect early vascular changes in obese kids and therefore guide interventions to prevent further CV damage in adulthood. Although PWV, the gold standard measure of arterial stiffness was not used, methods seem solid as demonstrated by a good coefficient of variation among observers. There is novelty in studying the effect of gender (pre-pubertal) on arterial stiffness. Importantly, this study is valuable because there is a paucity of studies on arterial stiffness in children, including obese children. However, this manuscript would be of much more impact if it was revised to include the reference vascular parameters of the whole study population (n=1017) as there is a need of reference values for female/male children in large studies.

In addition to values of the various parameters in Table 1 expressed as SDS of reference values, can the author add a table with absolute values, for the readers who are not familiar with the German reference values?

Can the authors briefly describe how the standardized values (SDS) are calculated?

Level of interest: An article of importance in its field

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

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.