Reviewer's report

Title: Evidence of Endothelial Dysfunction in Obese Non-Hypertensive Children

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Reviewer: Keiran Mather

Reviewer's report:

This is a well done paper using laser doppler on dorsal hand skin to evaluate post-occlusion hyperemia as a measure of endothelial function, comparing obese versus non-obese children. This is done in the context of a larger trial of sleep apnea, and the authors have taken this opportunity to carefully exclude subjects with underlying OSA, a potential confounder in similar prior work. The authors found that time to maximal post-occlusion flow response was prolonged in obese subjects, and related to BMI, to percent fat by bioimpedance, and to triglycerides.

The design and presentation are clean overall, and the paper reads well. The results are concordant with finding in other obese populations using other methods, but unique in the carefully defined pediatric population studied. I found both the introduction and the discussion wordy (not off topic, just needs shortening overall).

Major compulsory revision:

My main issues had to do with a lack of discussion/presentation of validation details regarding the doppler methodology. Although this is arguably moot given the positive findings, it would be of value to objectively present whether the method itself has been compared against other approaches, and whether the study-specific changes to methodology (short occlusions) have been systematically evaluated.

In general, do measures of skin microvascular responses relate to other measures of vascular function and/or to meaningful outcomes?

Discretionary revision:

A similar methodologic issue comes in a lack of detail of what parameters are extracted from the impedance measures. Which measures are direct and which are calculated? What is 'dry lean mass' and is it importantly different from overall percent body fat?

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:

I declare that I have no competing interests