Reviewer’s report

Title: A pilot cohort study of cerebral autoregulation and 2-year neurodevelopmental outcomes in neonates with hypoxic-ischemic encephalopathy who received therapeutic hypothermia

Version: 2 Date: 18 May 2015

Reviewer: Arastoo Vossough

Reviewer’s report:

In this pilot study, the authors have correlated a number of near-infrared spectroscopy derived measures with neurodevelopmental outcomes in a small cohort of neonates with hypoxic-ischemic encephalopathy that have undergone therapeutic cooling.

Overall I think the paper is well written and provides an impetus for further studies/confirmation in this area.

Major Compulsory Revisions

1. Do you believe that any potential confounders may have affected the accuracy of NIRS derived parameters during rewarming?

2. Along the same lines, you have mentioned that you could not control for a number of factors including PaCO2 in these groups, Could the effect of ventilatory support and/or varying degrees of supplemental oxygen affected the NIRS data? Were any changes in ventilation/oxygenation implemented during rewarming? Also, we know based on cerebral perfusion studies cause local or global changes in cerebral blood flow. Could this be a contributor/confounder to the observed differences on the NIRS derived measures?

3. You have mentioned

Minor Essential Revisions

1. Page 5-6: Reference 9 is not presented in order in the text.
2. Page 19: Reference 26 is about arterial ischemic stroke not HIE.
3. Page 5: spelling of inafter

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests