Reviewer's report

Title: Early Blood Glucose Profile and Neurodevelopmental Outcome at Two Years in Neonatal Hypoxic-Ischaemic Encephalopathy

Version: 1 Date: 5 November 2010

Reviewer: Rosemary D Higgins

Reviewer's report:

This manuscript describes the association of hypoglycemia with poor outcome following neonatal HIE.

Compulsory revisions:
1. The “protocolized” blood glucose measurements appeared to only require a glucose measurement in the first 30 minutes of life. Can the author expand on subsequent glucose measurements and follow up protocol if the glucose was deemed low and IV dextrose was given beyond a follow up at 30 minutes to 1 hour?

2. Almost half (25) of the cohort had mild encephalopathy. These infants, based on the literature and the outcome described in the manuscript, would be expected to have fairly normal outcomes. Thus 30 infants are at risk for adverse outcome in the study making the numbers very small. Can the authors look at the glucose levels in the moderate and severe encephalopathy infants to determine if hypoglycemia adds to the risk over and above the level of encephalopathy for adverse outcome? In the section titled “HIE grade, glucose profile, and outcome,” it appears that HIE grade is more important in determining outcome. Was hypoglycemia observed more often in the moderate to severe encephalopathy group of infants?

3. Were infants with hypoglycemia more likely to have seizures?

4. Were there any deaths that occurred?

5. Were any children found to be blind, severely visually impaired, hearing impaired or deaf at follow up? If so, how were these variables used in the definition of adverse outcome at 24 months.

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.

Declaration of competing interests:

NO conflicts to declare.
Co-Investigator on NICHD Neonatal Research Network Cooling trials.