Reviewer's report

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

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Reviewer: Alistair Gunn

Reviewer's report:

The authors have appropriately revised this manuscript. Critically they have added a multivariate analysis which confirms that early hypoglycaemia was strongly associated with severity of encephalopathy. The MS it is now suitable for publication.

I have some very trivial suggestions that the authors may wish to correct for completeness.

Trivia

results, page 7. "The median timing of initial blood glucose sampling was 25 minutes after birth (range 9-30 minutes)." The range is incorrect, since we are next told that the latest outborn glucose level was 10 min. either this statement refers only to the inborn infants --- and should be specifically described as such, or the range should be 9-100 min, and ? the median may need to be recalculated.

Page8. "The occurrence of early hypoglycaemia correlated "

discussion. page 11. "In infant rat_s_, it has"

Ibid. "However, in newborn piglets, fetal sheep and adult ratsanimal models, hyperglycaemia following hypoxia-ischaemia insult was shown to be harmful (21-23)." this statement misquotes the study in fetal sheep, which examined hyperglycaemia _during_ asphyxia only.

Further, the paper by Park et al, only examined the immediate reperfusion period, and only examined metabolic changes; it is unclear whether there was any persistent deleterious effect, or not.

that is to say: a slightly more nuanced description of these data would give the reader a better feel for the relatively limited implications of these experimental data.

discussion: "Initial blood glucose samples were collected within 30 minutes". this statement is incorrect based on the results, since some initial glucose data were not available until 100 min.

figure legend 2. "The whiskers represent the minimum and maximum of the data." are the authors sure that this is correct? I ask because there there are
some symbols outside the whiskers. many graphics programmes show the 90% or 95 CI and use symbols to show the full range. If the whiskers are indeed the full range, then the symbols need to be explained. There are additional symbols that may be asterixes above or below at least 4 infants. What do these represent?

Figure 1. The authors have not spread the symbols horizontally as requested, but rather made the data in to thin lines. This is (just) acceptable but much less visually easy to interpret.

Table 1. a. Please add the denominators to the data on mortality for severity of HIE. These data are in the MS of course, but it is much easier for the reader not to have search to find it.

b. I recommend adding a formal subheading for mortality for each level of HIE, again for easy of reading the table: ie,

Mortality
Mild HIE: 2/25
Moderate HIE: etc
Severe HIE: etc

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