Reviewer's report

Title: Follow-up study of neurodevelopment in 2-year-old infants who had suffered from neonatal hypoglycemia

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Reviewer: Ju Lee Oei

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Review BMC paediatrics Qiao et al
19 October 2018

This study aims to determine the relationship between duration of newborn hypoglycaemia and neurodevelopmental outcomes at 2 years of age. 144 infants were a blood glucose concentration <2.6 mmol per L were enrolled and followed up at 2 years by the Gessell test. Babies with hypoglycaemia before 2 hours of age, between 2-24 hours and after 24 hours of age were compared to non-hypoglycemic infants.

This is a good question but I was rather confused about how the paper was presented.

Specific comments are:

Abstract

1. Is A1 and A2 <2.6 instead of >2.6?

2. Describe the controls - were they also babies of diabetic mothers?

Background

1. Clarification between hypoglycaemia in infants of diabetic mothers and non-diabetic mothers should be made

2. What is the individualised perinatal network model for gestation diabetes mellitus (line 85)? Is there a reference?
Methods

1. The cohort is quite confusing. I am not sure what fig 1 refers to. Where did weight loss enter into the study? Does Fig 1 even relate to this study? The initial cohort is 1865 children - I can't find this in the text?

2. Why was the Gessell method used? This is not a widely acceptable test due to questions about its validity and reliability

3. Were the examiners blinded?

Results

1. Again, the numbers are confusing and without clarification will make interpretation difficult

Discussion

1. Please comment on the clinical significance of adaptability

2. The implication that long-term observation for babies with hypoglycaemia is necessary needs a bit more justification (line 267) when the major finding is an adaptability difference

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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