Reviewer's report

Title: Growth of a cohort of very low birth weight infants in Johannesburg, South Africa

Version: 1 Date: 21 December 2010

Reviewer: Linda L. Wright

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Major compulsory revisions:
1. Background, last sentence. The authors should make clear why they have chosen to compare their small sample with three other samples: the term WHO-CGS (2006), the IHDP international VLBW growth references (1997), and another So African VLBW sample (1997), given the difficulty of different age intervals, different available data and limited analyses. Use of the IHDP data is especially problematic, given that the data were estimations based on a graph "as the numerical data were not available." They should consider limiting the comparisons to provide more meaningful conclusions.

2. Methods: 3.2. Infants were followed at 3 monthly intervals post discharge. Time 0 is presumably 40 wks CGA but the authors should state whether all infants had been discharged by Time 0.

3. Methods: 3.1, 1st paragraph. The authors should provide a consistent statement of how gestational age (GA) was determined for their sample and use that gestation corrected GA consistently. Here the authors state that GA was determined by physical exam (the Ballard score needs a citation), but in Data analysis 3.3.2 they state that the expected data of delivery was used to correct for prematurity, implying that they had LMP or EDC (which may be more reliable in VLBW newborns).

4. Methods: 3.1, expression of age corrected for prematurity is most simply expressed as post-menstrual age. The authors should justify using CGA, given their standard definition (see 3 above).

5. Methods: 3.2. The authors should explicitly list the inclusion/exclusion criteria, e.g., inborn?, # 1500 gm., at least one post-discharge FU visit, maternal custody, etc.

6. Results: 4.1. It would be useful to provide some brief background for the outpatient growth results, e.g., mean length of stay, time to regain birth weight, whether SGA infants’ data were comparable to the entire sample.

7. Discussion: paragraph 9. Include the potential impact of 31% loss to follow up after first post-discharge clinic visit and HIV exposure to the list of limitations.

8. Discussion: final sentence, clarify that the recommendations are not evidence based.

Minor essential revisions:
1. Background, 1st paragraph. Survival of VLBW infants ….which raises a number of management dilemmas, including provision of optimal nutrition and appropriate growth monitoring.

2. Background, 2d paragraph. Growth monitoring…..where there are high rates of malnutrition and VLBW births.

3. Methods: 3.1, 1st paragraph. The authors state that this prospective cohort study was undertaken to determine neurodevelopmental outcome of VLBW infants. They provide clinical and demographic variables in Table 1; they should consider adding briefly why concurrent growth and nutritional monitoring by trained staff weren’t collected. Authors should also consider whether anthropometrics at discharge as a baseline, rather than the first clinic visit, would provide interesting data on growth in the early post-discharge period.

4. Discussion, 7th paragraph. The authors should consider a limited expansion of the section on rapid VLBW catch up growth to include the association between poor growth before two years and the risk of short stature and poor cognitive outcome, as well as the lack of evidence-based recommendations to limit catch up growth.

5. Discussion, 9th paragraph. Data were collected….., Data were read off a graph.

Discretionary revisions:
1. Capitalize Table and Figure.
2. Methods: 3.1. The authors should consider adding the maximum feeding rate for exclusively breast fed infants, an explanation of why infants were fed term infant formula after they achieved 1500 g, and a clarification of whether exclusive breast feeding was allowed through discharge in breast fed infants.
3. Data analysis, 3.3.2. Briefly explain why IHDP reference outside 95% confidence interval of the sample mean was used as a definitive of significance or provide citation.
4. Discussion, 8th paragraph. The choice of growth reference determines whether an infant is assessed...

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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. Linda L. Wright