Reviewer’s report

Title: Association between Pre-and Postnatal Growth and Longitudinal Trends in Serum Uric Acid Levels and Blood Pressure in Children aged 3 to 7 years

Version: 2 Date: 20 Aug 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are minor issues

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This is a fundamentally interesting study and the authors have done much to address the original peer reviewers' comments and thereby improve the report. There remain, however, a number of places where further revision should be required.

REQUESTED REVISIONS:
General Comments:
1. Although you have tried to separate preterm from term infants, LBW remains limited as a proxy measure for IUGR as smallness-for-gestational age (statistical concept) with true growth restriction (dynamic concept), defined as failure of the fetus to reach its genetically predetermined growth potential. This should be acknowledged as a limitation in the Discussion.
2. The design of the present study is unable to test for a direct causal link between uric acid levels and hypertension, per your hypothesis. This should be more clearly acknowledged and presented as association rather than causation.

Specific Comments:
Page 10 Line 205: The statement "17 children had SUA concentrations greater than normal (2.0-5.5mg/dl) at any follow-up point" is ambiguous. Does this mean the combined total "n" over all three time points i.e. does it take into account those with elevations at more than one time point? What was the consistency of elevated uric acid levels over time for patients with more than one measurement?
Page 10 Line 211: In table 1, please indicate which rows represent mean/SD and which represent median/IQR. It might be more transparent to show the former as mean+/-SD and latter as median [IQR] per general convention.
Page 13 Line 253: It would be more accurate to say "tendency towards a significant difference" than "borderline significance" [same comment applies to other uses of this expression throughout].
Page 15 Line 292: Please add citations to support your statements that "an increase in uric acid during pregnancy is a risk factor for LBW" and that "the increased uric acid in the pregnant mother passes freely into the fetal circulation". Moreover, to what degree is this due to the association with LBW and pre-eclampsia specifically?
Page 16 Line 315: Your assertion that there "the results of this study suggest... a critical intervention period to maintain an appropriate level of uric acid, thereby reducing the risk of elevated blood pressure in children" is pure conjecture and not supported by the data. Please temper your language.

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.

No

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 am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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