Reviewer's report

Title: Low birth weight contributed to increased serum IL-6 levels in infantile respiratory syncytial virus infection

Version: 0 Date: 06 Apr 2017

Reviewer: Jonathan M. Mansbach

Reviewer's report:

This manuscript describes an interesting study by Sheng and colleagues.

Major points:

1. The quality of English used to express the study design and results could be improved.

2. The viral testing results do not match most studies. Only 30% of children had RSV, which is quite low. And 63% had no pathogen detected. The authors may consider using a different testing platform to identify the viruses. Furthermore, rhinovirus is the second most common (~20-25%) cause of bronchiolitis requiring hospitalization. Would the authors consider testing for rhinovirus since the RSV-rhinovirus coinfection is the most common coinfection? And saying RSV-only really would require testing for rhinovirus.

3. The main problem is statistical. The authors should consider correcting for multiple testing. While the sample was stratified by weight, there is no further multivariable testing to control for other relevant variables.

4. Cytokines may vary over the course of a LRTI. Would the authors please comment about the timing of the blood draw and the role of disease course on cytokine levels.

5. The authors have (if after multivariable modeling and multiple test correction) demonstrated an association between RSV and IL-6. However, the discussion and conclusion quickly suggest causality. The pathway from RSV to asthma is multifactorial in LBW and normal weighted infants. IL-6 may be one factor, but the authors need to hedge a little more in their conclusions.
Minor point:

1. There are some typos throughout the manuscript (e.g., in the abstract - no capitalization after Background).

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.

Unable to assess

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:

Not suitable for publication unless extensively edited

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