Author's response to reviews

Title: Beta2-Adrenergic receptor promoter haplotype influences the severity of acute viral respiratory tract infection during infancy: a prospective cohort study

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Author's response to reviews: see over
July 31, 2015

RE: MS: 1787793635156298: “Beta2-Adrenergic receptor promoter haplotype influences the severity of acute viral respiratory tract infection during infancy: a prospective cohort study”

Dear Dr. Hui-Qi Qu:

Thank you to the Reviewers for their helpful comments. We are resubmitting for your consideration our manuscript titled “Beta2-Adrenergic receptor promoter haplotype influences the severity of acute viral respiratory tract infection during infancy: a prospective cohort study” together with a point-by-point response to the reviewers’ helpful comments. We thank Reviewer #2 for indicating that the responses in our first revision “are sufficiently well to allow the revised manuscript to be published,” and hope that this revision addresses any remaining concerns.

Our point-by-point changes in response to reviewers’ comments are described below.

Reviewer #1 (Mingzhi Zhang):

The aim of the article “β 2-Adrenergic receptor promoter haplotype influences the severity of acute viral respiratory tract infection during infancy: a prospective cohort study” is interesting and the result is new. The authors find that genotype may be predictive of severity of acute respiratory tract infections.

Major Compulsory Revisions

In Methods, Study population part,

1. The author wrote: we conducted an analysis of infants enrolled in ...... during an infant’s acute viral respiratory illness over four respiratory viral seasons, 2004-2008. How many of those had a lab-confirmed RSV infection or other virus infection? This should be clear.

Response: We have clarified and added the information in the Methods section (page 6, line 114-116):

“Eighty five percent of enrolled subjects had at least one respiratory virus identified by polymerase chain reaction (RSV, rhinovirus, influenza, parainfluenza, Human Metapneumovirus, and coronavirus); 56% had lab-confirmed RSV infection.”

Minor Essential Revisions

In Methods Infant acute respiratory infection severity part:

2. Were these BSS score rated only once on admission? If the baby needed later mechanical ventilation, did he/she had the same score as on admission? The authors could explain it.
Response: BSS was measured at the end of the outpatient visit or after discharge from an inpatient admission, and the most severe recorded value was used for analysis. We have added this information in the Methods section (page 7, lines 129-130).

Discretionary Revisions

In Methods Genotype determination part

3. Collection of the DNA specimens: how were the blood samples and saliva stored or were they analyzed immediately after taking?

Response: All oragene samples were processed immediately after collection, while blood samples were either processed immediately or frozen before processing. We have added the information in the Methods section (page 7, lines 134-135).

Reviewer #2 (Lahcen WAKRIM):

We are glad that we have addressed reviewer’s comments #1 (as Major Compulsory Revisions) and #3 (Minor Essential Revisions).

Below is our response to the comment as Discretionary Revisions:

1. Discretionary Revisions

   Authors should have included in their study a control population consisting of infants who have the same eligibility conditions and visited the hospital for other diseases than presumed viral bronchiolitis or respiratory tract infection. I think these control population could strengthen the associations between the genetic variants in ADRB2 and the severity of infant acute respiratory viral infections. Maybe, the author chooses to ignore this point.

Response: We thank the reviewer for the comment and apologize that our response was not clear. Below is our updated response to the point raised by the reviewer regarding a comparator population.

A control population who visited the hospital for other diseases than presumed viral bronchiolitis or respiratory tract infection could certainly help strengthen the associations between the genetic variants in ADRB2 and the severity of infant acute respiratory viral infections. However, the enrollment in this cohort is completed, so there is not a comparator population with other diseases that is available in whom we have similar measures. As a control population is not available, we have updated the discussion section to provide population-based allele frequencies of ADRB2 as a comparison (please see page 13 and 14, lines 277-285). Consistent results in genetic variants between our study and the published findings strengthen our findings between ADRB2 genotype and the severity of respiratory infection.

Thank you very much for your consideration of this revised manuscript for Publication in the BMC Medical Genetics.

Sincerely,
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References


