Author's response to reviews

Title: Pregnancy-Induced Hypertension and Infant Growth at 28 and 42 days Postpartum

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Author's response to reviews:

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The Editors
BMC Pregnancy and Childbirth

Re: MS: 1950945823633590 - Pregnancy-Induced Hypertension and Neonatal Growth at 28 and 42 days Postpartum

Dear Editors,

Thank you very much for your email dated April 26, 2005, and the reviewer's comments on our paper 'Pregnancy-Induced Hypertension and Neonatal Growth at 28 and 42 days Postpartum'.

Enclosed please find the revised manuscript taking into consideration the reviewer's comments and suggestions.

We trust that the revisions will make this paper acceptable for publication in the BMC Pregnancy and Childbirth.

Yours truly,

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We appreciate the reviewers' thoughtful comments on our paper. Our responses the questions of the reviewers with a point-by-point follow:

Reviewer 1 (Dr. Mark Walker):

1. In fact, we indicate the factors that were controlled for in the regression in the section "Definition of outcomes and confounding variables" (page 5-6) as well as in the Table 4, in which indicated that the regression coefficients were controlled for the confounding variables. As suggested by the second reviewer
(Dr. Michael Vincer), we have added “gestational age” as an adjustment variable in the regression models and presented new results in Table 4 in this revised manuscript. The results are similar to the ones without including gestational age in the model (please see details below in response to reviewer 2: question 3).

2. Based on our previous studies using the same database, in this Chinese population, we did not find pregnancy-induced hypertension had significant effects on preterm birth (Am J Obstet Gynecol 1999;180:207-213 and Ref. 13: Paediatric Perinatal Epidemiol 2004;18:186-191). For example, the mean gestational age was 39.3 weeks for normotensive, 39.4 weeks for gestational hypertension, 39.3 for preeclampsia, and 38.7 weeks for severe preeclampsia. Only severe preeclampsia slightly increased the risk of preterm birth but not statistically significant, with an odds ratio= 1.73, 95% confidence interval: 0.97-3.42, p>0.05. (From Table II, p. 210, Xiong X et al. Impact of pregnancy-induced hypertension on fetal growth. Am J Obstet Gynecol 1999;180:207-213). Therefore, we don't think there is a multiplicative effect of preterm birth and IUGR on fetal and infant growth.

3. We believe the format of the Table 3 is appropriate and the data presentations are straightforward.

Reviewer 2 (Dr. Michael Vincer):

1. a) N/A

2. a) We have added in this revised manuscript a sentence how the gestational age was measured that time. “Gestational age was determined by the obstetricians on the basis of the information on menstrual history, physical examination or early ultrasound examination.” (line 12, paragraph 2, page 5)

b) We agree with the reviewer. In addition to 105 stillbirths and 138 infant deaths, there were 15.8% infants without information on infant weight at 28 days or 42 days postpartum. We have added the term "lost to follow-up" (line 16, paragraph 2, page 4). We actually discussed this as the second limitation in the manuscript as (line 16, paragraph 2, page 10). As indicated in the manuscript, we compared these missing cases with those cases remained for analysis. There were no significant differences in demographic and reproductive characteristics between two groups. Furthermore, since the data are from a population-based, perinatal care registry, we don’t believe there is a systematic reason that such loss to follow-up was related to outcomes of interest, eg, pregnancy-induced hypertension or infant growth. Therefore, it is unlikely that the loss to follow-up would bias the findings.

c) We made the corrections by putting the brackets in the right place (line 20, paragraph 2, page 5) and in the Table 2 and Table 3

3. a) The reviewer mentioned one our previous study (ref. #6), which is based on a perinatal database from Canada. As we responded above to the question by reviewer 1 for the question 1, pregnancy-induced hypertension was not significantly associated with gestational age or preterm birth in this Chinese population. However, to address reviewer's concern, we re-did multivariate analysis by including gestational age as a confounding variable into the model as the reviewer suggested. As we expected, the estimates of the coefficients (i.e., the weight difference between PIH group and non-PIH/non-IUGR group after controlled for confounders) change (Table 4). For example, at 42 days postpartum, for severe preeclampsia with IUGR group, the coefficients decrease from 1012.2 g to 903.0 after including gestational age in the model. However, the coefficients increase slightly for the normotensive with IUGR group (form 609.7 g to 619.9) as well as the gestational hypertension with IUGR group (from 666.5 g to 678.9 g). Again, the results of multivariate analysis (Table 4) are consistent with those of univariate analysis (Table 3): IUGR infants born to mothers with any of the PIH groups had significantly lower infant weight at 28 and 42 days postpartum (i.e., all coefficients are large and p<0.001 or statistically significant); In contrast, infant born to mothers with any type of PIH without IUGR have normal growth (i.e., all coefficients are small and p>0.05 or not statistically significant). Including gestational age into the model does not change the conclusion!! In this revised manuscript, Table 4 presents the results from the models which include gestational age as an adjustment variable.

4. N/A

5. See the response to question 3.

6. We agree with the reviewer. We have changed "neonatal" to "infant". Since including gestational age into the model does not change the conclusion, the abstract is not needed to modify.

7. a) We have replaced "neonatal" with "infant" in the manuscript.
b) We have changed "means" to "mean".