Manuscript Number: 67680

Associations of gestational anemia with pregnancy conditions and outcomes: a nested case-control study.

Dear editor and reviewers:

Thank you very much for your contributions and comments from reviewers on this article. The comments are really important for us to refine our research report.

The article has been modified according to each comment from editor and reviewers and resubmitted. All changes were highlighted. We'd like to make a detailed reply here. If anything is unclear, we are pleasure to provide more information.

Reviewer #1:
Scientific Quality: Grade C (Good)
Language Quality: Grade B (Minor language polishing)
Conclusion: Minor revision
Specific Comments to Authors: The study presents high quality and deals with important clinical issue, such type of study is needed. I have only few small remarks that authors should address properly. I recommend to accept the manuscript after minor revision. There are only some points to correct: 1. please provide the list of abbreviations 2. please provide the number of ethical approval 3. introduction and discussion section need improvement; 4. please provide information on how your results will translate into clinical practice 5. in discussion section please provide study strong points and study limitation section 6. please correct typos All abovementioned issues are crucial for the credibility of the results. The paper can be accepted only after addressing all the issues and another subsequent review. I recommend to accept the manuscript after minor revision.

Re:

1. The list of abbreviations was added to the manuscript in 'ABBREVIATIONS' section. (Page 13). Please check.

2. The ethical approval number was already provided in the part of 'Study design and subjects' of 'MATERIALS AND METHODS'. [The study was approved by the Ethics Committee of Peking Union Medical College Hospital, Chinese Academy of Medical Sciences (No. JS-1060)]. (Page 6). Please check.

3. Introduction and discussion section have been improved. Please check.

4. Information on how your results will translate into clinical practice have been added in the 2 paragraph of discussion section "The results may have been due to the differences of local economic development, lifestyle, and diet of these regions, which may also help to boost local policy reformation to adapt to the demographic characteristics" (Page 10). Please check.

5. Strong points and study limitation section have been added in the 6 and 7 paragraphs of the discussion section. (Page 11 and12). Please check.

6. Typos have been corrected and language has been polished by native speaker. Please check.

Reviewer #2:
Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: My comments are 1. Gestational anemia in China is associated with geographical distribution, premature birth, and PROM. The substantial explanation regarding this conclusion should be added in the discussion. 2.This was case control study, the choosing of control always be the difficult part. Could the author added on the methods to confirm the reader that the controlled was matched not make a selection bias.

Re:

1. Gestational anemia in China is associated with geographical distribution, premature birth, and PROM. The substantial explanation regarding this conclusion should be added in the 2 and 5 paragraphs of the discussion section. (Page 10 and 11). Please check.

2. The choosing of control has been added on the methods (Page 6 and 7) and has been discussed in the discussion section (Page 11 and 12). Please check.

As this study only analyzed the data collected over a certain period of population of a prospective cohort were included, so the time that women got involved into the study was matched. In this nationwide survey, with strict criteria, we excluded women with a history of anemia, hematological disease, blood transfusion within the past six months or immune diseases before pregnancy to eliminate possible factors that associated with anemia. Moreover, subgroup analysis was exerted to minimize selection bias. Pre-pregnancy BMI was classified as low, normal, overweight, and obese. Gestational weight gain was divided into 12 subgroups. Age was divided into six subgroups. Univariable logistic regression was first conducted to identify factors potentially associated with gestational anemia. Then, multivariable logistic regression analysis was used to find out factors associated with gestational anemia.

Thanks to the reviewers for their meticulous work and we learned a lot.

Again, we appreciate your consideration and look forward to hearing from you soon!

Kind regards,

Ma Liangkun, on behalf of all the co-authors

Peking Union Medical College Hospital (PUMCH)