Author’s response to reviews

Title: Evaluation of right ventricular function in fetuses with isolated single umbilical artery using spatiotemporal image correlation M-mode

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Author’s response to reviews:

Dear Editors and Reviewers:

Thank you very much for giving us an opportunity to revise our manuscript. We sincerely appreciate editors and reviewers for their constructive comments and suggestions on our manuscript entitled “Evaluation of right ventricular function in fetuses with isolated single umbilical artery using spatiotemporal image correlation M-mode”. Those valuable comments are very helpful for us to revise and improve the manuscript. We have studied the comments carefully, have addressed these comments, and revised the manuscript accordingly. The revised parts are marked in red in the paper. The detailed responses to the reviewer’s comments are as follows:

Responses to the reviewer’s comments:

Reviewer 1:

1. I don't think that the following sentience is useful, "the authors believe that if the study continues in the future with a large sample size of the isolated SUA, we can predict the weight of isolated SUA fetuses with f-TAPSE in third trimester” the aim of the study is not to predict the birth weight

Response: As reviewer suggested that we have deleted the relevant content and have corrected it according to the reviewer's comments. (page11-12,line211-215).

2. How could you exclude that the difference of TAPSE between the 2 groups doesn't reflect only a lower weight and not a RV dysfunction?
Response: In this study, the difference of f-TAPSE between isolated SUA normal group and control group of third trimester was significant. Previous study have showed that f-TAPSE had a steady linear increase over the course of gestation and strong correlation with GA and estimated fetal weight[Reference15]. So, the effect that causes f-TAPSE between the two groups may be due to the difference in fetal weight. We cited relevant reference and explained it (line 211-215). In addition, Virtual organ computer-aided analysis (VOCAL) was used to obtain right ventricular volume parameters in our study. The parameters were measured including the end-diastolic volume (EDV), end-systolic volume (ESV), left and right ventricular stroke volume (SV), ejection fraction (EF) and right cardiac output (CO). The results show that there was no significantly difference in CO between the right ventricles of the isolated SUA normal group and control group of third trimester.

3. The authors declare that they have no competing interests.

We deeply appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. If you have any queries, please don’t hesitate to contact me according to the address below.

Thank you and best regards.

Yours sincerely,

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