ROUND 1

Thanks for the valuable and insightful comments from peer reviewers. My coauthors and I have read carefully and made amendments according to the reviewers' suggestions. The point by point response are listed as following.

Major comments

The authors have demonstrated a unique approach to the utilization of the FGMS and have presented some interesting data. However, definitions of various parameters and detailed descriptions of patient backgrounds are insufficient, and the reliability of the data needs to be improved.

1. In Table 1, the description of the status of prednisone intake at the time of cortisol and ACTH measurements should be included. Besides, ACTH values are in the reference range in all groups, and the results may not indicate hypopituitarism.

**Response:** Thanks for your comments. We collected the cortisol and ACTH measurements in recruited hypopituitary patients during prednisone treatment. And, the description of the status of prednisone intake at the time of laboratory tests was added in the footnote of Table 1.

We added the diagnostic criteria and causes of hypopituitarism in the manuscript (Line 194-200, Page 7; Line 279-281, Page 10).

2. The authors state in the Introduction that although hydrocortisone is the default for GCs replacement, prednisone is used as the GCs in this study. I think the authors should clarify the reason for this.

**Response:** Thanks for your comments. Due to the difficult availability of HC in China, most of hypopituitarism patients received prednisone treatment instead. Also, we added the explanation in the manuscript (Line 214-216, Page 8).

3. Prednisone dosage should be 5mg → 5mg/day.

**Response:** Thanks for your comments. We modified the description of prednisone dose in the manuscript according to your suggestion.

4. (Methods) Please add details about the PG group in this study (cf. diagnostic criteria for hypopituitarism, distribution of diseases causing hypopituitarism)

**Response:** Thanks for your comments. We added the diagnostic criteria for hypopituitarism and distribution of diseases causing hypopituitarism in the manuscript (Line 194-200, Page 7; Line 279-281, Page 10).

5. Please indicate the product name of the flash glucose monitoring system used and its distributor.

**Response**: Thanks for your comments. The product name and distributor of the flash glucose monitoring system were added in the manuscript (Line 178, Page 7).

6. Please provide definitions of PT1, PT2, PT3, TIR, and TOR in the text.

**Response:** Thanks for your comments. Definitions of glucose-target-rate parameters were added in the manuscript (Line 254-260, Page 9).

7. Please provide a definition of "hypoglycemia" in the text.

**Response:** Thanks for your comment. The definition of hypoglycemia was added in the manuscript (Line 273, Page 10).

8. If statistical comparisons were done please specify the groups to which you compared the results (see p10 L274-275, L284-286).

**Response:** Thanks for your comments. We made amendments according to your

suggestion (Line 305-306, Page 11; Line 316, Page 11).

9.    (Table) Please specify in the text or in the figure legend what you mean by "Disease duration (days)" in Table 1. Please provide the average BMI of the patients.

**Response:** Thanks for your comments. The description of disease duration was added in the manuscript (Line 286, Page 10). The average BMI in each group was added in the Table 1.

Thank you for your careful response to my comments, I would like to comment on a few points. 1. I asked for comments about ACTH concentrations in Table 1. in the first review. However, I did not receive a clear answer. This patient group is on steroid replacement therapy for hypopituitarism. Even if the effect of prednisone is diminished, or even if ACTH secretion is suppressed by prednisone, ACTH concentrations would be expected to be low. However, the ACTH levels in Table 1 are in the normal range in all groups. I think the authors need to mention why ACTH secretion is preserved in the patient group.

**Response**: Thanks for your comments. As you have mentioned above, the measured ACTH are within the normal range in all groups, which could challenge the accuracy of hypopituitarism diagnosis. However, we actually obtained these results in our recruited patients, probably indicating partial ACTH deficiency. When a patient conformed to diagnosis criteria of hypopituitarism and received prednisone replacement, he/she was recruited in this study. We recruited nine Sheehan's syndrome, four empty sella, six hypophysectomy, and one pituitary hypoplasia. Of these patients, 16 of them have ever suffered acute hypopituitarism, presenting symptoms of hyponatremia, hypotension, hypoglycemia, and etc.; four of them were diagnosed by stimulation test (stimulated cortisol<500nmol/L); significantly reduced levels of 24-hour urinary free cortisol were detected in all of the recruited patients during the course of disease. And, we also added this relevant information in the manuscript (METHODS section and RESULTS section).

In addition, the normal ACTH levels in all the groups could be a clue to a reasonable pred replacement regimen because overdose pred might suppress ACTH secretion. However, glucose metabolism profile recorded by FGMS identified impaired glucose metabolism, leading to increased cardiovascular events in these patients. From this perspective, the seemingly suitable pred dose should be reassessed with caution and FGMS can be a promising and reliable assessment device. We discussed this point in details in the DISCUSSION section (last paragraph).

2. Another comment is very trivial. I recommend that the details of the freestyle libre be included in the "Methods" section. The authors describe blood glucose from Freestyle Libre as blood glucose." Please use the correct terms "blood glucose" and "sensor glucose" so as not to confuse the reader.

**Response:** Thanks for your comments, we have described details of freestyle libre in the METHODS section.

The expression of blood glucose was replaced by sensor glucose in the manuscript according to your suggestion.