Reviewer’s report

Title: Q-Score: Development of a new metric for continuous glucose monitoring that enables stratification of antihyperglycaemic therapies

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Reviewer: Jae Hyoung Cho

Reviewer’s report:

This paper is about a new index for CGMS results. CGMS is becoming a more popular method to assess patients’ glucose control status. But it is not easy to analyse the CGMS data at a glance. Q score that the authors introduced would be very helpful for many clinicians to evaluate patients’ glucose control status and characteristics.

Comments

1. The Q score from the CGMS data is correlated to patients metabolic control status. Metabolic control status was classified to very good, good, satisfactory, fair and poor by three diabetes specialists. But, there is no any definition about the classification. It could be very obscure. I think more accurate and concrete definitions for classification of patients according to metabolic control or glucose control should be shown in this paper.

2. Mean HbA1c of the subjects analysed in the paper was 7.0%, which means that their glucose control status was relatively good. I think CGMS data are so variable according to glucose control status. For example, a patient with good glucose control status would show a small range of glucose change, while some patients with bad glucose control status would show a large range of glucose change. So the proportion according to glucose control status could be an important factor. I recommend Q score and its implication should be shown according to level of HbA1c. For example, HbA1c < 7%, 7~8%, 8~10%, >10%.

3. Use of Insulin could affect glucose change so much. I can not see medication history of the patients. Medications of the subjects need to be categorized, no medication, oral agents and insulin, etc. At least, the subjects should be classified insulin use group or non-use group. And further analysis about correlation between Q score and patients’ metabolic control status should be done in both groups.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests.