Reviewer’s report

Title: A proof-of-concept study to evaluate the efficacy and safety of BTI320 on post-prandial hyperglycaemia in Chinese subjects with pre-diabetes

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Reviewer: Takahiro Ishikawa

Reviewer's report:

The authors observed the effect of galactomannan to suppress postprandial hyperglycemia in order to suppress new onset of diabetic patients.

The increase in diabetic patients has become a major problem all over the world, and this research contains important points in that respect.

However, I think that there are some check things about the results in this paper.

Major
1. In this study, a decrease in postprandial AUC was observed in CGM in a low dose BTI320 group, not a high dose BTI320 group.
   On the patient background, in the low dose BTI320 group compared to the placebo and the high dose BTI320 groups, the body weight was heavy and the BMI was large.
   In addition, the body weight was significantly decreased in the low dose BTI320 group.
   Is there a possibility that obesity patients have a weight loss effect and as a result AUC has decreased?
   I think that it should be examined when dividing it into two groups of placebo and BTI320 intervention, divided into BMI.

2. Compared with the placebo and high dose BTI320 groups, the ratio of cases of both IFG and IGT were small in the low dose BTI320 group.
   There were few cases of both IFG and IGT in low dose BTI320 compared with placebo or high dose BTI320 groups.
   Both IFG and IGT patients may be more likely to have impaired glucose tolerance.
   Is this the reason why there was a significant difference between the low dose BTI320 group and the placebo group?
   Please compare effectiveness by disease condition such as IFG or IGT.

3. It is reported that the increase in blood glucose after eating is greater in elderly people than in young people.
   Please consider the effectiveness of BTI 320 by age.

4. The authors used fructosamine as a marker for postprandial hyperglycemia improvement, but no
difference was found. As a marker of postprandial hyperglycemia, 1.5 AG and the like are also known. Please indicate if you have measured items other than fructosamine.

5. In the BTI administration group, the appearance of symptoms such as abdominal distension was reported. Are there any differences in frequency and severity of symptoms of side effects between low dose BTI320 group and high dose BTI320 group? please explain.

6. Regarding inhibition of progression from borderline diabetes to diabetes mellitus, the effectiveness of α-GI was reported in other papers (e.g. STOP-NIDDM and Victory Trial). Is there a merit or advantage of using BTI instead of α-GI as a suppression effect of borderline diabetes? At least in this paper, I cannot find improved elements other than AUC in CGM. Please describe the merit of BTI compared with α - GI in the discussion.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend a additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable
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