Efficacy and Safety of Gelidium Elegans Intake on Bowel Symptoms in Obese Adults

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Background/Aims: Gelidium elegans (GE) is known to have anti-obesity effects and beneficial effects on functional bowel symptoms in preclinical studies. The aim of this study was to determine the efficacy and safety of GE intake on bowel symptoms in obese human adults. **Methods:** This 12-week single-center randomized double-blind placebo-controlled study was performed from September 2016 to May 2017. Consecutive obese subjects were randomly assigned (1:1) to either GE (1 g) or placebo (1 g) once daily group for 12 weeks. Patients' bowel symptoms were evaluated using the Bristol Stool Form Scale, Constipation Scoring System (CSS) and Patient Assessment of Constipation-Symptoms (PAC-SYM) questionnaire. **Results:** The stool symptom score of PAC-SYM significantly improved in the GE group compared with the placebo group after the 12-week treatment (p=0.041). Abdominal discomfort score of CSS significantly decreased at 12 weeks compared to that at baseline in the GE group (p=0.003), but not in the placebo group (p=0.398). In addition, abdominal discomfort score of CSS slightly decreased in the GE group compared with the placebo group after the 12-week treatment (p=0.060). However, stool consistency, total CSS score and PAC-SYM score did not change significantly in both GE group and the placebo group over the 12-week treatment period. **Conclusions:** GE treatment for 12 weeks improved the stool symptom score on the PAC-SYM and abdominal discomfort score on the CSS in obese adults. However, further research is needed in large-scale human studies.

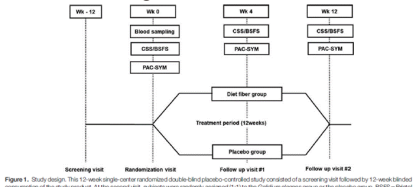

Figure 1. Study design. This 12-week single-center randomized double-blind placebo-controlled study consisted of a screening visit followed by 12-week blinded consumption of the study product. At the second visit, subjects were randomly assigned (1:1) to the Gelidium elegans group or the placebo group. BSFS = Bristol stool form scale, CSS = constipation scoring system, PAC-SYM = Patient Assessment of Constipation-Symptoms.

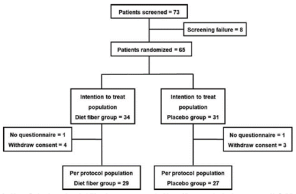

Figure 2. Flow chart of subjects. During the study period, 73 patients were screened; of them, 65 were randomized to treatment with Gelidium elegans or placebo. Of the 65 randomized patients, 58 completed the 12-week study and diary (G. elegans group = 27 vs. placebo group = 29). Four and five subjects dropped out of the placebo and dietary fiber groups, respectively.