The impact of fucoidan on gut microbiota and gastrointestinal symptoms

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Introduction: Functional dyspepsia (FD) is a gastroduodenal disorder that presents as postprandial fullness, early satiation or epigastric burning despite no evidence of a structural disease that is likely to explain the symptoms for over 6 months. To FD patients we use various therapies, such as administration of proton pump inhibitors (PPIs), Acotiamide, histamine-type 2 receptor antagonists, prokinetic agents. However, the efficacy of these agents is limited. Fucoidan is a complex sulfated polysaccharide derived from marine brown seaweed (Mozuku). The effect of fucoidan has reported as anti-inflammatory, anti-coagulant, anti-thrombotic, anti-adhesive H. Pylori, anti-ulcerogenic, improvement of gastric emptying function, anti-tumor and anti-oxidant activities and so on.

Patients & Methods: Between March 2015 and July 2015, we enrolled 5 patients who were diagnosed with FD. All patients already use some agents (e.g., PPI, Acotiamide and TJ-43). We have a questionnaire (FSSG) before, 4 weeks and 8 weeks after ingesting fucoidan soft capsule (240 mg/day for 4 weeks). This questionnaire (FSSG) is a self-report instrument containing 12 questions written in a simple and easy-to-understand language. As reported previously by Kusano and colleagues (2004), the following definitions were used to identify symptoms in the F-scale: “Do you get heartburn?”; “Does your stomach feel bloated?”; “Does your stomach ever feel heavy after meals?”; “Do you sometimes subconsciously rub your chest with your hand?”; “Do you ever feel sick after meals?”; “Do you get heartburn after meals?”; “Do you have an unusual sensation in your throat?”; “Do you feel full while eating meals?”; “Do some things get stuck when you swallow?”; “Do you get bitter liquid coming up into your throat?”; “Do you burp a lot?”; and “Do you get heartburn if you bend over?” Symptoms frequency was measured on the following scale: Never=0; occasionally=1; sometimes=2; often=3 and always=4. If the patient has a score of more than 7 point, GERD is considered as positive. This study was carried out in accordance with the Declaration of Helsinki and approved by the ethical committee at Toho University.

Results: It was recognized that FSSG score was decreased by ingesting fucoidan in 4/5 patients.

Conclusion: It is concluded that ingestion of fucoidan will improve abdominal symptoms and FSSG score for refractory FD patients.

Biography
Yoshihisa Urita is working as a professor at Toho University. He is the department director of General Medicine and Emergency Care Center. He has completed his masters in medicine from Toho University School of Medicine in 1985. He has published more than 25 papers in reputed journals. He is the board member of Japanese Society of Endoscopy and Japanese Society of Hospital Medicine

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