Safety and efficacy of Vonoprazan-based triple therapy against *Helicobacter pylori* infection: A single-center experience with 1118 patients

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Dear Editor,

Helicobacter pylori infection is the most common infectious disease worldwide and is thought to be a cause of gastric cancer [Park *et al.* 2014]. Standard therapy against *H. pylori* infection comprises co-administration of a proton-pump inhibitor with antibiotics; however, maintaining the pH of the stomach mucosa to preserve antibiotic function can be difficult. Vonoprazan, a novel potassium-competitive acid blocker, exerts rapid and strong proton-pump inhibition and has been approved in Japan for the treatment of acid-related disease and *H. pylori* infection [Garnock-Jones, 2015]. A few reports have described the non-inferiority of vonoprazan compared with lansoprazole in clinical trials, but published data regarding the efficacy and safety of vonoprazan against *H. pylori* infection, especially in the medical practice setting, are limited [Katayama *et al.* 2016; Ashida *et al.* 2016; Murakami *et al.* 2016]. From March 2015 to February 2016, 1118 patients with *H. pylori* infection (1172 cases) underwent treatment including vonoprazan at a single center in Nagasaki, Japan. This study was approved by the Yutaka Fukuda Surgery Clinic Institutional Review Board. *H. pylori* infection was determined by a urea breath test. Overall, 1021 patients received first-line 7-day therapy with vonoprazan, amoxicillin, and clarithromycin, a regimen approved for insurance coverage by the Japanese Government. A total of 151 patients, who had failed first-line therapy at our facility or another institution, were treated with vonoprazan, amoxicillin, and metronidazole as second-line therapy. The overall rate of grade 2 side effects, as defined by the Common Terminology Criteria for Adverse Events, was 2.1% and included diarrhea (0.98%), nausea or vomiting (0.36%), constipation (0.09%), abdominal pain (0.54%), skin rash (0.27%), and heartburn (0.45%). The rate of adverse effects was 2.0% for first-line therapy and 2.4% for second-line therapy. While confirmation of eradication was recommended to all participants, only 65% (724/1118) of patients chose to do so. Of the 669 patients who received first-line therapy and were retested for *H. pylori* infection after therapy, eradication was achieved in 614 cases (91.4%), which is comparable to the eradication rate reported by Murakami and colleagues for a smaller sample [Murakami *et al.* 2016]. Of 95 patients who received second-line therapy and were retested for *H. pylori* infection, eradication was achieved in all patients (100%). No significant difference in eradication rate was observed between age groups (<65, 65–74, >74 years) or genders. Our data show that vonoprazan is an efficient and relatively well tolerated treatment for *H. pylori* infection.

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