A novel strategy for treatment of NSAIDs-induced small intestinal damage

○Toshio Watanabe, Tetsuo Arakawa
(Department of Gastroenterology, Osaka City University Graduate School of Medicine)

Recent advances in diagnostic methods such as capsule endoscopy have enabled us to examine the entire small bowel, and we now recognize that NSAIDs cause small bowel damage with high frequency. Our study using capsule endoscopy showed that the incidence of mucosal breaks (erosions/ulcers) in the small intestine was significantly higher in the NSAID users compared to that in the non-NSAID users in patients with rheumatoid arthritis; mucosal breaks were detected in 13 of 16 patients (81.3%) and 4 of 12 patients (33.3%) in the NSAID group and non-NSAID group, respectively. We also evaluated ulcerogenic effect of aspirin on small intestine. Capsule endoscopy found mucosal breaks in 8 of 9 patients (88.9%) who took low-dose aspirin. Eight-weeks treatment with misoprostol, a prostaglandin E_1 analogue, significantly decreased the numbers of mucosal breaks caused by low-dose aspirin, although 2 of 9 patients withdrew before completing the study protocol due to severe watery diarrhea. We recently demonstrated that NSAIDs stimulated inflammatory responses in the small intestine via activation of Toll-like receptor 4, a receptor for lipopolysaccharide, resulted in induction of injuries (Watanabe et al, Gut, 2008). Thus use of some agents possessing anti-inflammatory effects could be considered an alternative treatment for NSAIDs/aspirin-induced small intestinal damage in cases who can not take misoprostol.