

Effect of Dual-Oligo Saccharide on Loperamide-Induced Constipation in Rat Model

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Abstract : We investigated the effects of GOS, lactulose and DuOligo in loperamide-induced constipation rat model. Dual-Oligo saccharide (DuOligo) was composed with galacto-oligosaccharide (GOS) and lactulose. GOS is an important dietary prebiotics that affects intestinal microbiota and barrier functions to have beneficial effect and lactulose is used as a laxative to treat constipation. To study the DuOligo, after adaptation period of four weeks of Sprague-Dawley rats, loperamide (5 mg/kg, twice per day) was injected to induce constipation for 1 week. DuOligo increased the fecal pellet amount, fecal weight, and water content of feces in rats with loperamide-induced constipation. DuOligo groups tended to produce more total fatty acid than that of observed for the control group. Gastrointestinal transit ratio and length and area of intestinal mucosa increased after treatment with DuOligo in loperamide-induced rats. These results showed that oral administration of DuOligo significantly modulated intestinal peristalsis.

Keywords : constipation, DuOligo, GOS, lactulose

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