과민성 대장 증후군 치료제 개발을 위한 대장 수축성 조절 검색

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The protective effect of SR-105 on the irritable bowel syndrome model.

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Abstract: The present study investigates the influence of candidates SR series on the mechanical activity of the colonic smooth muscle. Irritable bowel syndrome (IBS) is a biopsychosocial disorder on the colonic smooth muscle contractility degrading the quality of life. Mucosa-denuded colonic rings from male Sprague-Dawley rats were used and isometric contractions were recorded using a computerized data acquisition system. The aim of present study was to investigate the possible development of anti-irritable bowel syndrome agents depending on candidates-induced modulation of colonic contractility. Interestingly, direct-added SR-105 or 104 concentration-dependently and significantly inhibited carbachol-induced contraction showing similar relaxant responses regardless of mucosal function. On the other hand, pretreated SR-105 inhibited carbachol-induced contraction. In conclusion, this study provides the evidence and possible related mechanism concerning the relaxing effect of a candidate SR-105 as a gastrointestinal modulator on the agonist-induced colonic contraction regardless of mucosal function.

Key words: Colonic muscle contraction, irritable bowel syndrome, mucosa, muscarinic receptor, Rho-kinase