

척수재활

게시일시 및 장소 : 10 월 19 일(토) 08:30-12:30 Room G(3F)

질의응답 일시 및 장소 : 10 월 19 일(토) 11:00-11:30 Room G(3F)

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Comparison of the Effect of Oxybutynin and Mirabegron on Rectal Compliance in Patients with SCI

So Jung Lee^{1*}, Ju Hyun Son¹, So Jung Kim¹, Myung Hoon Moon¹, Sungchul Huh¹, Hyun-Yoon Ko^{1,2†}, Hyun-Yoon Ko^{1,2†}

Pusan National University Yangsan Hospital, Department of Rehabilitation Medicine¹, Pusan National University School of Medicine, Department of Rehabilitation Medicine²

Introduction

Neurogenic lower urinary tract dysfunction is a major concern in patients with spinal cord injury (SCI). Antimuscarinics are the first-line drugs for the pharmacologic treatment of neurogenic detrusor overactivity (DO). However, antimuscarinics for overactive bladder reduce bowel movement, increase rectal compliance, alter the activity of the anorectal reflex, and worsen constipation. Previous studies reported that mirabegron, a newly invented β_3 -adrenoceptor agonist, had similar efficacy with conventional antimuscarinics in the treatment of DO, but there was less dry mouth and constipation in individuals with overactive bladder. The purpose of this study is to compare the effect of oxybutynin and mirabegron on rectal compliance by anorectal manometry (ARM) in patients with SCI.

Methods

A retrospective cross-sectional retrospective study was conducted. In 30 patients taking either oxybutynin or mirabegron, ARM was performed. Patients with a neurological level of injury above T12 with upper motor neuron bowel were included. Rectal compliance was calculated by plotting the relationship between balloon volume (dV) and steady-state intrarectal pressure (dP) in ARM. Rectal compliance reflects the capacity and distensibility of the rectum. The statistical comparison of the effect of oxybutynin and mirabegron on rectal compliance was analyzed.

Results

Of the 30 patients with SCI, 23 took oxybutynin and 7 had mirabegron. Demographics and descriptive data are listed in Table 1. Rectal compliance was statistically lower in patients treated with mirabegron than in oxybutynin ($p < 0.05$) (Table 2).

Conclusion

Although there is a limitation in the study that includes a small number of subjects, the mirabegron group had significantly lower rectal compliances than the oxybutynin group. In our clinical experience, oxybutynin-taking patients complained constipation more

severely or frequently than patients taking mirabegron, and this may be strongly related to low rectal compliance. We will design another study to prove the relationship between rectal compliance and constipation.

Table 1. Demographics and clinical characteristics of the subjects

Variables	Number	
	Mirabegron (n=7)	Oxybutynin (n=23)
Age (years)	39.3 ± 19.8	46.0 ± 16.7
Gender		
Male	5 (71.4%)	19 (82.6%)
Female	2 (28.6%)	4 (17.4%)
Neurologic level of injury		
Tetraplegia	2 (28.6%)	17 (73.9%)
Paraplegia	5 (71.4%)	6 (26.1%)
AIS		
A	3 (42.9%)	15 (65.2%)
B	0 (0.0%)	0 (0.0%)
C	1 (14.3%)	5 (21.7%)
D	2 (28.6%)	3 (13.0%)

Table 2. Mann-Whitney test for comparison of the effect of oxybutynin and mirabegron on rectal compliance

	Oxybutynin	Mirabegron	<i>p</i> -value
Rectal compliance (mL/mmHg)	6.23 ± 3.27	1.93 ± 0.97	0.00*