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FACTORS AFFECTING PERSISTENCE WITH THERAPY OF SOLIFENACIN TREATMENT IN PATIENTS WITH OVERACTIVE BLADDER SYNDROME

Hypothesis / aims of study
To assess the factors affecting persistence of solifenacin treatment in patients with overactive bladder (OAB).

Study design, materials and methods
We retrospectively analyzed the records of 280 OAB patients who received solifenacin between January 2009 and March 2010 at our institution. Patients who discontinued solifenacin without physician's decision or who didn't make return visit to clinic were defined as non-persistence group. We analyzed patient characteristics, comorbidities, uroflow parameters, 3-day voiding diaries, OAB-q questionnaire, solifenacin dosage and adverse effects. Chi-square test, student t-test and logistic regression analysis were used for statistical analysis.

Results
100 patients (35.7%) discontinued solifenacin or didn't make return visit to clinic. Among them, 20 patients were within 12 weeks. Reasons of discontinuation of medication and treatment were collected through telephone poll. They were "no symptomatic improvement (55%)", "symptom subside (25%)", "because of adverse effect like dry mouth, constipation and blurred vision(15%)" and so on(economical reason, troublesome, non-response..). Univariate analysis demonstrated that female (49.4% vs 63.0%, P=0.029), no dose increase in spite of OAB symptoms didn't improved (62.2% vs 79.0%, P=0.015), pretreatment maximal urinary flow rate (Qmax) (14.8±8.3 vs 18.6±10.5, P=0.005), no improvement of urgency (4.0±3.9 vs 6.5±3.7, P=0.017) predicted discontinuation of solifenacin and didn't make return visit to clinic. On multivariate analysis, change of urgency (number/24hr) at 12 week from pretreatment was the only significant independent risk factor. Age, comorbidity and adverse effect rate did not show statistical difference between the discontinuation group and persistence group ($p<0.05$).

Interpretation of results
No increase of solifenacin in spite of OAB symptoms didn't improved was the risk factor of non-persistence of solifenacin. Adverse effects of solifenacin didn't influence the persistence of solifenacin.

Concluding message
Poor improvement of OAB symptom could promote patients to discontinuate solifenacin. Appropriate dose increase and understanding of disease will improve the persistence of solifenacin in patients with OAB.

Table 1. Characteristics of total patients and univariate comparison between two groups

	Total	Persistency		
		Persistence (n=180)	Non-Persistence (n=100)	P- value
†AGE	63.45±14.6	63.8±13.9	63.0±15.9	0.624
††Sex				***0.029***
Male/Female	45.7%(n=128)/ 54.3%(n=152)	50.6%(n=91)/ 49.4%(n=89)	37%(n=37)/ 63%(n=63)	
††Comorbidity				***0.015***
Positive/negative	30.7%(n=86)/ 68.2 %(n=194)	36.7%(n=66)/ 62.2%(n=112)	20%(n=20)/ 79%(n=79)	
†† Dose increase				***0.023***
Yes/No	34.6%(n=97)/ 68.2%(n=183)	39.4%(n=71)/ 60.6%(n=109)	26%(n=26)/ 74%(n=74)	
†Pretreatment				
Q-max(ml/sec)	16.1±9.3	14.8±8.3	18.6±10.5	***0.005***
Residual urine volume(ml)	34.1±57.0	36.6±62.9	29.7±44.5	0.370
Voiding number(episodes/24 hr)	10.3±3.9	10.5±4.0	10.0±3.8	0.454
Nocturia(episodes/24 hr)	1.7±1.4	1.7±1.5	1.7±1.3	0.763
Urgency(episodes/24 hr)	5.7±4.6	5.7±4.6	5.6±4.7	0.860
†Treatment 12-week				
Q-max(ml/sec)	13.4±7.6	13.5±8.0	13.1±6.7	0.834

	Residual urine volume(ml)	52.2±78.1	58.5±79.8	35.7±72.4	0.235
	Voiding number(episodes/24 hr)	9.3±2.7	9.2±2.6	9.4±2.9	0.736
	Nocturia(episodes/24 hr)	1.5±1.1	1.6±1.1	1.4±1.2	0.503
	Urgency(episodes/24 h)	4.8±4.0	4.0±3.9	6.5±3.7	***0.017***
††Adverse effect					
	Positive/Negative	16.1%(n=45)/ 83.9%(n=235)	18.3%(n=33)/ 81.7%(n=147)	12%(n=12)/ 88%(n=88)	0.167

† : Independent-sample t-test, ††: Pearson's Chi-square test

Table 2. Risk factors for discontinuation of solifenacin

	Logistic regression analysis	
Risk factors*	**P- value**	**Odds ratio**
Sex	0.267	0.436
Comorbidity	0.756	0.695
Pretreatment Q-max	0.130	1.052
Change from pretreatment at 12-week urgency (episodes/24 hr)	***0.007***	***1.293***

* Logistic regression analysis

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**we optained informed consent from patients**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**