

## POST-TREATMENT OBJECTIVE VOIDING FUNCTION PARAMETERS ARE NOT ASSOCIATED WITH IMPROVEMENT OF QUALITY OF LIFE INDEX AFTER LONG-TERM COMBINATION THERAPY OF ALPHA-BLOCKER AND DUTASTERIDE FOR MEN WITH LUTS/BPH

### Hypothesis / aims of study

Male patients with clinically benign prostate hyperplasia (BPH) and lower urinary tract symptoms (LUTS) are often treated with combination therapy of alpha-blocker and 5-alpha-reductase inhibitor (5-ARI) such as dutasteride with satisfactory results. The total prostate volume (TPV) reduction, increase of maximum flow rate (Qmax) and reduction of postvoid residual volume (PVR) were reported after the combination therapy. However, the relationship between patients' self-reported quality of life index (QoL-I) and objective voiding function parameters after treatment have not been determined. The study was designed to investigate the relationship between the reported QoL-I and objective voiding function parameters in patients after long-term combination therapy of alpha-blocker and dutasteride.

### Study design, materials and methods

One hundred and fifty-three male patients with clinical LUTS/BPH were retrospectively enrolled into this study. All patients received doxazosin 4 mg and dutasteride 0.5mg every day from 2007 to 2012. The patients who had received BPH/LUTS associated surgery were excluded. The patients were investigated for International Prostate Symptom Score (IPSS), TPV, Qmax, PVR and voided volume at baseline and 4 years after the combination therapy. QoL-I of the American Urological Association Symptom Index questionnaire was used to evaluate the subjective therapeutic outcome. The patients with QoL-I of 0~2 and 3~4 are considered as good and fair result, respectively.

### Results

After 4 years combination therapy, there were 140 patients and 13 patients with good and fair therapeutic results, respectively. The TPV, Qmax, PVR and voided volume at baseline and after treatment were not significantly different between patients with good and fair result after 4 years treatment (Table 1). Patients with good QoL results had significant improvement of IPSS-storage, IPSS-voiding, IPSS-total scores, Qmax, voided volume and PVR. However, TPV did not significantly decrease after treatment. The improvements of these parameters were not noted in patients with fair QoL results. Patients with good QoL results might not have improvement in all parameters. Chi-square test also revealed there was no significant difference between different QoL results and the improvement of each grouping parameters of IPSS, Qmax, PVR and TPV after 4 years treatment (Table 2).

### Interpretation of results

The results of this study suggested TPV, Qmax, PVR and voided volume at baseline and after 4 years combination therapy of doxazosin and dutasteride were not associated with patients' self-reported QoL results. The improvement of IPSS, Qmax, PVR and TPV could not predict good QoL results. The patients' subjective assessment of urinary symptoms might not be correlated with objective voiding function parameters. If patients did not improve QoL after the combination therapy, physicians should take care of patients' LUTS such as nocturia, urgency or intermittency and investigate possible pathophysiology for their residual LUTS and [initiate](#) alternative treatment.

### Concluding message

Objective voiding function parameters are not associated with patients' QoL results after 4 years combination therapy of doxazosin and dutasteride in patients with LUTS/BPH.

Table 1. Baseline and post treatment voiding function variables of patients with good or fair QoL results after 4 years combination therapy

		QoL-I 0~2	QoL-I 3~4	P-value
IPSS-voiding	Pre-Tx	6.85 ± 6.36	10.91 ± 5.84	0.043
	Post-Tx	1.94 ± 2.71	10.00 ± 4.69	0.000
	Change	4.87 ± 6.39 *	1.90 ± 6.71	0.145
IPSS-storage	Pre-Tx	5.61 ± 3.46	6.64 ± 3.20	0.350
	Post-Tx	3.20 ± 1.72	6.77 ± 3.54	0.000
	Change	2.41 ± 3.49 *	-0.36 ± 3.61	0.013
IPSS-total	Pre-Tx	12.81 ± 8.92	17.23 ± 7.81	0.087
	Post-Tx	5.28 ± 3.72	16.77 ± 6.25	0.000
	Change	7.33 ± 8.90 *	0.46 ± 9.14	0.018
Qmax (mL/s)	Pre-Tx	10.27 ± 5.00	9.22 ± 4.49	0.467
	Post-Tx	12.83 ± 6.12	9.95 ± 1.10	0.100
	Change	-2.60 ± 6.64 *	-0.74 ± 0.62	0.316
Voided volume (mL)	Pre-Tx	198.5 ± 118.5	142.4 ± 70.2	0.096
	Post-Tx	237.8 ± 137.7	182.4 ± 96.6	0.158
	Change	-38.5 ± 166.2 *	-40.0 ± 128.7	0.975

PVR (mL)	Pre-Tx	79.5 ± 87.7	78.3 ± 65.5	0.961
	Post-Tx	61.3 ± 62.6	57.8 ± 53.8	0.853
	Change	21.5 ± 97.2 *	20.4 ± 88.7	0.971
TPV (mL)	Pre-Tx	48.43 ± 26.67	43.31 ± 16.48	0.500
	Post-Tx	47.16 ± 22.95	49.93 ± 15.16	0.671
	Change	1.27 ± 15.51	-6.60 ± 14.70	0.081

QoL: quality of life scale. IPSS: International Prostate Symptom Score, Qmax: maximum flow rate, PVR: postvoid residual volume, TPV: total prostate volume

\* Significant improvement between baseline and after 4 years treatment,  $p < 0.05$

Table 2. Change from baseline voiding function parameters of patients with good or fair QoL result after 4 years combination therapy

	QoL 0~2	QoL 3~4	Chi-square p-value
ΔIPSS > 8	64 (45.7%)	2 (15.4%)	0.091
ΔIPSS 4~8	11 (7.9%)	1 (7.8%)	
ΔIPSS < 4	65 (46.4%)	10 (76.9%)	
ΔQmax > 4	49 (35.7%)	2 (15.4%)	0.369
ΔQmax 2~4 (mL/S)	34 (24.8%)	4 (30.8%)	
ΔQmax < 2	54 (39.4%)	7 (53.8%)	
ΔPVR > 50	35 (26.3%)	4 (33.3%)	0.638
ΔPVR 10~50 (mL)	25 (18.8%)	1 (8.3%)	
ΔPVR < 10	73 (54.9%)	7 (58.3%)	
Δ TPV > 20 %	33 (23.6%)	2 (15.4%)	0.225
Δ TPV 10~20%	19 (13.6%)	0 (0 %)	
Δ TPV < 10 %	88 (62.9%)	11 (84.6%)	

QoL: quality of life scale. IPSS: International Prostate Symptom Score, Qmax: maximum flow rate, PVR: postvoid residual volume, TPV: total prostate volume

#### Disclosures

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