Initial monotherapy in elderly men with lower urinary tract symptoms based on International Prostate Symptom Score voiding-to-storage subscore ratio

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Introduction & Objectives
Many elderly men with lower urinary tract symptoms (LUTS) are already exposed to polypharmacy before beginning a LUTS medication. This pilot study has been conducted to determine whether initial monotherapy based on International Prostate Symptom Score (IPSS) voiding-to-storage subscore ratio (IPSS-V/S) is suitable for patients with LUTS aged 70 years or older.

Materials & Methods
Patients aged ≥70 years with a total IPSS (IPSS-T) 8 or more at the first visit were enrolled from December 1 to December 31 in 2016. Men who previously received any medical or surgical treatment for LUTS were excluded. The IPSS voiding subscore (IPSS-V) and storage subscore (IPSS-S) were recorded separately and the IPSS-V/S was calculated. Patients were divided into 2 groups according to the baseline IPSS-V/S; IPSS-V/S >1 vs. IPSS-V/S ≤1. Initial monotherapies with tamsulosin 0.2 mg/day and propiverine 10 mg/day were administered to the elderly patients with IPSS-V/S >1 and IPSS-V/S ≤1, respectively. At 1 month, after the LUTS medication, IPSS questionnaire and uroflowmetry with bladder scan were examined.

Table 1. Baseline characteristics of 2 groups

	IPSS-V/S >1 (n=73)	IPSS-V/S ≤1 (n=32)	P
Age	76.0 (73.5–79.0)	75.5 (73.0–80.8)	0.288
PSA	3.0 (1.8–3.8)	2.7 (1.2–3.8)	0.081
IPSS-T	23.5 (18.0–29.0)	18.0 (15.3–23.0)	<0.001
IPSS-V	17.0 (13.0–20.5)	7.0 (4.5–10.3)	<0.001
IPSS-S	6.0 (3.8–8.5)	11.3 (9.0–12.0)	<0.001
QoL	4.0 (3.0–5.0)	4.0 (3.0–5.0)	0.896
Qmax	8.6 (6.1–10.9)	11.7 (8.2–15.8)	0.024
PVR	52.0 (20.5–85.0)	44.0 (20.5–69.3)	0.135

All data of IPSS-V/S >1 and IPSS-V/S ≤1 groups were a median (interquartile range).

Results
We included 73 and 32 patients in the IPSS-V/S >1 and IPSS-V/S ≤1 groups, respectively. After initial monotherapy for 1 month, both groups showed improved results. In IPSS-V/S >1 group, the IPSS-T, IPSS-V as well as IPSS-S were significantly decreased also QoL and Qmax were improved in this group. IPSS-V/S ≤1 group showed a significant decrease from IPSS-T, IPSS-S, and QoL. There was no significant increase in postvoid residual volume or urinary retention in patients receiving propiverine (IPSS-V/S ≤1 group). The adverse effects caused by tamsulosin and propiverine were mild, including dizziness (4/73) and dry mouth (9/32), respectively.

Conclusion
Initial monotherapy with tamsulosin 0.2 mg/day for IPSS-V/S >1 group and propiverine 10 mg/day for IPSS-V/S ≤1 group is a safe and effective treatment for patients aged 70 years or older. Although this is a pilot study, this strategy is expected to help improve polypharmacy in elderly patients.

Table 2. Changes after monotherapy for 1 month

	IPSS-V/S >1 (n=73)			IPSS-V/S ≤1 (n=32)		
	1st visit	After 1 mo	P	1st visit	After 1 mo	P
IPSS-T	23.5	13.0	<0.001	18.0	15.0	0.027
IPSS-V	17.0	9.5	<0.001	7.0	6.0	0.333
IPSS-S	6.0	3.0	<0.001	11.3	8.5	0.001
QoL	4.0	3.0	0.009	4.0	3.0	0.048
Qmax	8.6	10.5	0.018	11.7	12.6	0.095
PVR	52.0	41.0	0.072	44.0	53.0	0.106

All data of '1st visit' and 'After 1 mo' of 2 groups were a median.

Because this study was a pilot study, IRB approval was not received, but patients' consents were obtained.