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INITIAL MONOTHERAPY IN ELDERLY MEN WITH LOWER URINARY TRACT SYMPTOMS BASED ON INTERNATIONAL PROSTATE SYMPTOM SCORE VOIDING-TO-STORAGE SUBSCORE RATIO

Hypothesis / aims of study
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.

Study design, materials and 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.

Results
We included 73 and 32 patients in the IPSS-V/S >1 and IPSS-V/S ≤1 groups, respectively. After a medication in IPSS-V / S >1 group, IPSS-T decreased from 23.5 to 13.0 (P <0.001), IPSS-V from 17.0 to 9.5 (P <0.001), IPSS-S from 6.0 to 3.0 (P <0.001), QoL from 4.0 to 3.0 (P = 0.009), and Qmax increased from 8.6 to 10.5 mL/s (P = 0.018). In IPSS-V/S ≤1 group, IPSS-T decreased from 18.0 to 15.0 (P=0.027), IPSS-S from 11.3 to 8.5 (P=0.001), and QoL from 4.0 to 3.0 (P=0.048). 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 dizziness (4/73) and dry mouth (9/32), respectively, but both showed mild symptoms.

Interpretation of results
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. No specific side effects were seen.

Concluding message
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 1. Baseline characteristics of 2 groups

	IPSS-V/S >1 (n=73)	IPSS-V/S ≤1 (n=32)	P
Age, years	76.0 (73.5–79.0)	75.5 (73.0–80.8)	0.288
PSA, ng/mL	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 (mL/s)	8.6 (6.1–10.9)	11.7 (8.2–15.8)	0.024
PVR (mL)	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).

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 (mL/s)	8.6	10.5	0.018	11.7	12.6	0.095
PVR (mL)	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.

Disclosures
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