

SLOW STREAM IS ESSENTIAL FOR POOR RESPONDER IN (1-ADRENOCEPTOR THERAPY TO STORAGE SYMPTOMS WITH BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Between 50% and 75% of patients with benign prostatic hyperplasia (BPH) have overactive bladder (OAB) symptoms. In the majority of BPH patients with OAB symptoms (BPH/OAB patients), improvements in maximum flow rate or obstructive symptoms together with improvements in OAB symptoms are seen as a result of administering α_1 -adrenoceptor antagonists (" α_1 -blockers"). However, OAB symptoms are not resolved by α_1 -blockers in the first therapy. In such cases, increasing the dose of the α_1 -blocker or add-on therapy is therefore necessary.

This study investigated the factors involved in resolving of OAB symptoms following an increase in the α_1 -blocker dose in BPH/OAB patients in whom the initial treatment of OAB symptoms with the α_1 -blocker was unsuccessful.

Study design, materials and methods

One-hundred and six patients were enrolled in this study. The International Prostate Symptom Score (IPSS), quality of life (QOL) score, estimated prostate volume and Overactive Bladder Symptom Score (OABSS)¹ were used to diagnose BPH/OAB patients at the time of enrolment. The following selection criteria were used: IPSS of 8 or above; QOL score of 2 or above; estimated prostate volume of 20 mL or greater; urgency score component (Q3) of OABSS of 2 or above; and total OABSS of 3 or above. In BPH/OAB patients in whom urinary urgency was unresolved after initial treatment with an α_1 -blocker (50 mg of naftopidil once per day), 75 mg of naftopidil was administered once per day for 8 weeks. The OABSS, IPSS, QOL score, maximum flow rate (Qmax), average flow rate (Qave) and post-void residual urine volume (PVR) were evaluated before and after secondary treatment with the α_1 -blocker. Based on the results of OABSS, we divided patients into those in whom OAB symptoms had resolved ("resolved OAB symptoms group") and those in whom OAB symptoms were unresolved ("unresolved OAB symptoms group"), and examined differences in subjective symptoms on the basis of the IPSS and OABSS, and differences in objective findings on the basis of uroflowmetry and PVR between both groups. The resolution of OAB symptoms was defined in terms of the urgency score component (Q3) for OABSS being less than 2 or total OABSS being less than 3.

Results

Forty-nine BPH/OAB patients in whom the initial α_1 -blocker treatment was unsuccessful were analyzed. OAB symptoms resolved in 21 of 49 patients (42.9%) after secondary treatment with an α_1 -blocker. Mean age and mean prostate volume were 72.2 years and 40.7 mL, respectively, in the resolved OAB symptoms group, and 72.8 years and 37.4 mL, respectively, in the unresolved OAB symptoms group. The change in the total OABSS from the start of the secondary treatment in the resolved OAB symptoms group (-2.33) indicated a significant decrease when compared with the change in the unresolved OAB symptoms group (-0.82). Changes in total IPSS, frequency, urgency and slow stream from the start of the secondary treatment in the resolved OAB symptoms group were -4.52, -0.81, -1.33 and -0.52, respectively, revealing a significant decrease when compared to the changes in the unresolved OAB symptoms group (-0.71, -0.07, -0.29 and +0.14, respectively). The change in Qave (+1.38) from the start of the secondary treatment in the resolved OAB symptoms group showed a significant increase when compared to changes in the unresolved OAB symptoms group (+0.49). (Table)

Interpretation of results

OAB symptoms resolved following secondary treatment with α_1 -blocker in some of the BPH/OAB patients in whom initial treatment with the α_1 -blocker was unsuccessful. The group in which OAB symptoms were unresolved following secondary treatment with the α_1 -blocker exhibited a significantly smaller reduction in slow urinary stream than the group in which OAB symptoms resolved. The group in which OAB symptoms were unresolved following secondary treatment with the α_1 -blocker exhibited a significantly smaller increase in Qave than the group in which OAB symptoms resolved.

Concluding message

We found that improvement in urinary stream is vital for resolving OAB symptoms in BPH/OAB patients. In treating BPH/OAB patients with α_1 -blockers, it is imperative to both examine OAB symptoms, and to monitor urinary stream. A pathological condition that interferes with improvements in urinary stream due to α_1 -blockers may be a cause of urinary urgency in BPH/OAB patients.

Table: Comparison of changes in data before and after secondary treatment with α_1 -blocker in resolved OAB symptoms group and unresolved OAB symptoms group

	Resolved symptoms group Mean	OAB	Unresolved symptoms group Mean	OAB P-value*
Total OABSS	-2.33		-0.82	<0.01
OABSS item				
Q1. Daytime frequency	-0.10		+0.11	0.109
Q2. Nocturia	-0.29		-0.29	1.000
Q3. Urgency	-1.52		-0.39	<0.001
Q4. Urge urinary incontinence	-0.43		-0.25	0.568
IPSS total score	-4.52		-0.71	<0.05
IPSS item				
Feeling of incomplete voiding	-0.52		-0.07	0.088
Frequency	-0.81		-0.07	<0.05
Interruption of urinary stream	-0.48		-0.29	0.506
Urgency	-1.33		-0.29	<0.01
Slow stream	-0.52		+0.14	<0.05
Strained voiding	-0.48		-0.21	0.473
Nocturia	-0.38		-0.07	0.436
QOL score	-0.48		-0.54	0.763
Qmax (mL/s)	+1.82		+1.60	0.511
Qave (mL/s)	+1.38		+0.49	<0.05
PVR (mL)	-19.03		-8.96	0.630

*Mann-Whitney U-test

References

1. Yokoyama O. et al. Clinical guidelines for overactive bladder. Int. J. Urol. 2009; 16, 126-142.

Disclosures

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