

## CORRELATION AMONG LOWER URINARY TRACT SYMPTOMS, BOTHERSOMENESS, AND QUALITY OF LIFE IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA AND ASSOCIATED FLUCTUATIONS WITH TAMUSULOSIN TREATMENT

### Hypothesis / aims of study

In providing medical care for patients with benign prostatic hyperplasia (BPH), bother and quality of life (QOL) assessment of patients suffering from lower urinary tract symptoms (LUTS) have recently been suggested as important, in addition to LUTS assessment itself. Nonetheless, correlations among 3 factors, including patient LUTS, bothersomeness, and QOL, and fluctuations in these factors affected by treatment, have not been adequately estimated. This study estimated correlations among LUTS, bothersomeness, and QOL and fluctuations in these factors following  $\alpha$ 1-blocker administration.

### Study design, materials and methods

Untreated BPH patients with international prostate symptom scores (IPSS)  $\geq 8$  and IPSS-QOL scores  $\geq 2$  were administered tamsulosin at 0.2 mg/day for 4 weeks in a prospective multi-center study. We subsequently estimated IPSS, bothersomeness score for each IPSS item according to a face scale of 5 points, BPH impact index (BII), and IPSS-QOL score before and after 4 weeks of tamsulosin administration. We also analyzed LUTS that might strongly influence QOL using a path analysis model.

### Results

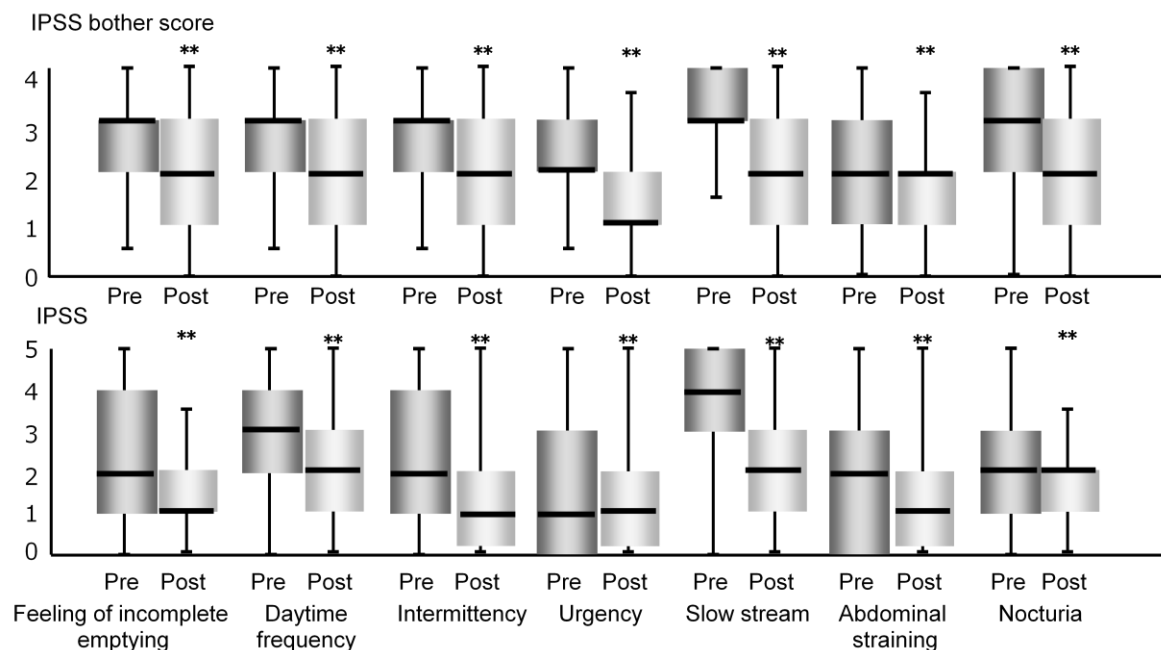
Analyzable data were obtained from 198 of the 257 patients enrolled. The scores of each item for IPSS and IPSS bother at baseline and after tamsulosin administration are demonstrated in Figure 1. In IPSS, LUTS evaluation yielded the highest score for slow stream, followed by increased daytime frequency and nocturia. LUTS with the highest bothersomeness score was for slow stream, followed by nocturia. For slow stream, both IPSS and bother scores were highest. We observed dissociations between IPSS and bothersomeness scores in both urgency and nocturia. Although high scores were observed in items of physical discomfort and bothersomeness in BII, the score in time kept from usual activities was lower than for other items (Figure 2). Following tamsulosin administration, IPSS total and individual scores, bother total and individual symptom scores, BII total and individual index scores, and IPSS-QOL score demonstrated significant improvements. Via path analysis, BII items strongly influencing QOL comprised physical discomfort and bothersomeness. Furthermore, LUTS that strongly influenced QOL comprised feelings of incomplete emptying, urgency, and slow stream.

### Interpretation of results

The present study demonstrated that slow stream was most frequent and bothersome symptoms, but that there were some dissociations between frequency and bother of LUTS especially in urgency and nocturia. Although urgency and slow stream have previously been recognized as symptoms affecting patient QOL, feelings of incomplete emptying has also been demonstrated to be a key symptom that strongly influence QOL in this study.

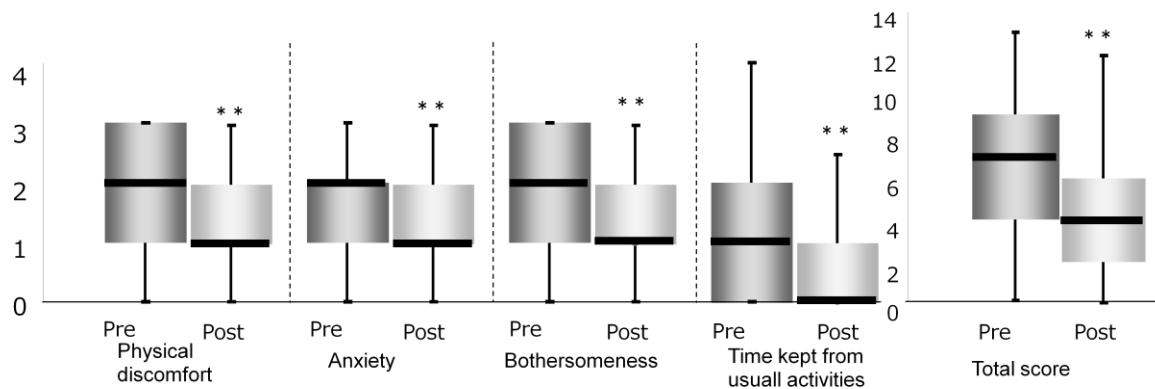
### Concluding message

Tamsulosin administration improved patient QOL by possible mechanisms via improvement in subjective symptoms and bothersomeness. The important symptoms of LUTS that strongly influenced QOL comprised feeling of incomplete emptying, urgency, and slow stream.



Comparison of each score between pre- and post-treatment; \*\* $p < 0.01$  Wilcoxon's signed ranks test

Fig.1 Scores of each item of IPSS and IPSS bother at baseline and after tamsulosin administration



Comparison of each score between pre- and post- treatment; \*\*p<0.01 Wilcoxon's signed ranks test

Fig. 2 Scores of each domain of BPH Impact Index at baseline and after tamsulosin administration

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<b>Is this a clinical trial?</b>	<b>Yes</b>
<b>Is this study registered in a public clinical trials registry?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Nagoya University Hospital IRB</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>