CORRELATION OF SEVERITY OF INTERNATIONAL PROSTATIC SYMPTOM SCORE (IPSS) WITH UROFLOWMETRY AND URINARY BLADDER WEIGHT IN MAN WITH LOWER URINARY SYMPTOMS (LUTS)

Hypothesis / aims of study
Ultrasound-estimated bladder weight (UEBW) was recently used to evaluate bladder outlet obstruction (BOO) but the actual cut-off value was rarely reported and also difficult to be determined. The aim of the study was to evaluate the possible relationship of IPSS in man with LUTS by the tests of uroflowmetry and UEBW.

Study design, materials and methods
UEBW was determined non-invasively with portative ultrasound device; BladderScan® BVM 6500 (Diagnostic Ultrasound, Bothell, WA), which produces three-dimensional V-mode images. In a total of 77 men aged 50 years or more was evaluated with IPSS, uroflowmetry and UEBW. These men were divided into 2 groups (IPSS ≤ 15 and IPSS ≥ 16). 39 men (aged 69.05 ± 7.58, median 68.00) were in group I and 38 men (aged 66.26 ± 8.52, median 65.50) were in group II.

Results
The measured urine in urinary bladder was 242.64 ± 91.23 ml in group I and 239.70 ± 115.64 ml in group II, P > 0.05. The maximal uroflow rate was 14.33 ± 7.58 and 11.51 ± 5.72 ml/sec, P < 0.05. The average post-void residual urine was 88.78 ± 88.75 ml, median 60.00 and 98.86 ± 53.00 ml, median 53.00, P > 0.05. UEBW showed 47.77 ± 8.59 g, median 47.00 and 47.34 ± 9.12 g, median 46.00, P > 0.05.

Interpretation of results
The preliminary results displayed non significant difference between IPSS with UEBW but showed significant difference with uroflowmetry in man with LUTS. That is, uroflowmetry but not UEBW is related to severity of IPSS. UEBW was reported to predict BOO in man and can be a clinical parameter to evaluate the treatment outcome (1,2,3). In our study, we did not find the same result as others. In addition to the technique of operating bladder scan, the duration of LUTS might be an important factor to influence the changes of bladder weight. On the contrary, uroflowmetry was less likely to be influenced by the duration of lower urinary symptoms.

Concluding message
Although UEBW is non-invasive and easy to be performed, uroflowmetry but not UEBW was related to the severity of lower urinary symptoms in men.

References