

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 portable 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 \leq 15 and IPSS \geq 16). 39 men (aged 69.05 \pm 7.58, median 68.00) were in group I and 38 men (aged 66.26 \pm 8.52, median 65.50) were in group II.

Results

The measured urine in urinary bladder was 242.64 \pm 91.23 ml in group I and 239.70 \pm 115.64 ml in group II, P>0.05. The maximal uroflow rate was 14.33 \pm 7.58 and 11.51 \pm 5.72 ml/sec, P< 0.05. The average uroflow rate was 7.44 \pm 4.87 and 5.59 \pm 2.94 ml/sec, P < 0.05. The average post-void residual urine was 88.78 \pm 88.75 ml, median 60.00 and 98.86 \pm 53.00 ml, median 53.00, P> 0.05. UEBW showed 47.77 \pm 8.59 g, median 47.00 and 47.34 \pm 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

1. Arch Ital urol Androl(2002) 74(2) 90-4.
2. Hinyokika Kyo(2004) 50(1): 7-14.
3. Adv Exp Med Biol(2003) 539; 311-5.

Specify source of funding or grant	No.
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	Ultrasound-estimated bladder weight was determined non-invasively and regular procedure.
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No