

**Abstract Reproduction Form B-1**

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Title (type in CAPITAL LETTERS)	DYNAMIC CHANGE OF BLADDER HYPERTROPHY IN BPH PATIENTS TREATED BY INDWELLING CATHETER : EVALUATION USING ULTRASONIC MEASUREMENT OF BLADDER WEIGHT

AIMS OF STUDY

It is well known that bladder hypertrophy was found in patients with obstructive diseases such as benign prostatic hyperplasia (BPH). We previously reported that ultrasound estimated bladder weight (UEBW) correlated well with infravesical obstruction as evaluated by pressure flow study and it decreased to a normal level after surgical treatment of BPH^{1),2)}. In this paper, we report the early changes of UEBW after the relief of infravesical obstruction by an indwelling urethral catheter in BPH patients who visited our clinic with urinary retention.

PATIENTS AND METHODS

A total number of 16 patients (75.2±7.5years), who presented with urinary retention caused by BPH and were treated with an indwelling urethral catheter, underwent the repeated measurements of UEBW at the time of urinary retention and every week for subsequent 4 weeks.

Transabdominal ultrasonography was performed using 7.5MHz probe with the bladder filled with 150ml saline through an indwelling urethral catheter. UEBW was calculated from intravesical volume and thickness of the anterior bladder wall obtained by scanning lower abdomen, supposing the bladder to be sphere.³⁾

RESULTS

In all 16 patients, UEBW was abnormally increased to over 35.0g, ranging from 37.0g to 126.6g with a mean of 69.3±29.0g, at the time when a catheter was indwelled. Thereafter, UEBW decreased significantly to 60.0±31.3g at 1week (p<0.001), 53.4±30.0g at 2weeks (p<0.0001), 49.8±28.0g at 3weeks (p<0.0001), 49.6±26.7g at 4weeks (p<0.0001), respectively. In 3 (19%) of the 16 patients, UEBW decreased to less than 35.0g at 1 week after treatment, 5(31%) at 2 weeks, and 8(50%) at 4weeks. In 8 (73%) of 11 patients with



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UEBW of less than 80.0g before treatment, UEBW decreased to less than 35.0g in 4 weeks. In contrast, in none of 5 patients with UEBW of greater than 80.0g before treatment, UEBW decreased to less than 35.0g at 4weeks after treatment.

CONCLUSIONS

The present study revealed that bladder hypertrophy caused by infravesical obstruction was changeable dynamically in relatively short time such as 1 week after the relief of obstruction. UEBW could be measured repeatedly due to its non-invasiveness and was of clinical use to monitor the change of bladder hypertrophy at early phase after the relief of obstruction. The data obtained in this study has made the background for the evaluation of treatment effects in terms of the improvement of bladder hypertrophy as evaluated by UEBW in patients with BPH.

REFERENCES

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