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THE TRANSRECTAL ULTRASONOGRAPHIC PREDICTORS OF ACUTE URINARY RETENTION IN PATIENTS UNDERWENT TRANSURETHRAL RESECTION DUE TO BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study
Acute urinary retention is one of the most severe complications in patients with benign prostatic hyperplasia (BPH). We investigated the effective parameters obtained by transrectal ultrasonography (TRUS) as predictors of acute urinary retention in patients underwent transurethral resection of prostate due to BPH.

Study design, materials and methods
Of 155 patients with BPH, who underwent transurethral resection of the prostate (TUR-P), 73 were treated due to acute urinary retention (retention group) and 82 due to lower urinary tract symptoms (symptomatic group). TRUS was used to calculate the total prostate (TP) and transitional zone (TZ) volumes, the transitional zone index (TZ index=TZ volume/TP volume) and the elongation ratio (ER=the ratio of the maximal anteroposterior to transverse diameter of the prostate). To compare the usefulness of various parameters between the retention and symptomatic groups, the area under the receiver-operating characteristic (ROC) curve was calculated for each parameter.

Results
There were significant differences in the TP and TZ volumes, the TZ index and the elongation ratio between both groups, but no significant differences in age, I-PSS or QOL score. In the retention group, the most effective cutoff values were 40cc, 20cc, 0.55 and 0.75 for the TP volume, the TZ volume, the TZ index and the elongation ratio, respectively. The area under the ROC curves were 0.894, 0871, 0843 and 0771 for the TZ index, the elongation ratio, the TZ volume and the TP volume, respectively.

Interpretation of results
The TP and TZ volumes, the TZ index, and the elongation ratio are useful predictors of acute urinary retention in patients with BPH.

Concluding message
 The TZ index and ER is more effective predictors, and may be useful parameters in selecting the treatment for BPH.