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USING TRANSRECTAL COLOR DOPPLER ULTRASOUND TO PREDICT DETERIORATED STORAGE SYMPTOMS IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA AFTER TRANSURETHRAL RESECTION OF PROSTATE

Hypothesis / aims of study
To assess in a retrospective study the use of variables, presumed circle area ratio (PCAR), resistive index (RI) and pulsatility index (PI), to predict deteriorated storage symptoms in patients with benign prostatic hyperplasia (BPH) 12 months after transurethral resection of prostate (TURP).

Study design, materials and methods
Between July 2005 and December 2010, 102 men (mean age 69.9 years, range 53-86) with symptomatic BPH were included for evaluation. Transrectal color Doppler ultrasound was done before and 12 months after TURP for all the patients. PCAR is the ratio of the area of the maximum horizontal section of the prostate to the area of a presumed circle of which the circumference is equal to the circumference of the maximum horizontal section. Resistive index (RI) and pulsatility index (PI) were used to detect the blood flow in the urinary bladder and prostate. Overactive bladder symptom score (OABSS) was evaluated before and 12 months after TURP in all the patients. Patients who had higher OABBS after TURP than before were group 1 and others were group 2.

Results
Of 102 patients, 20 (19.6 %) were group1 and 82 (80.4%) were group 2. OABSS before TURP and 12 months after TURP was 8.8 ± 2.2 vs. 9.5 ± 1.9 and 8.9 ± 2.5 vs. 3.6 ± 2.1 in groups 1 and group 2 patients, respectively. Patients in group 1 had significantly higher PCAR (0.79 ± 0.05 vs.0.63 ± 0.04), and lower RI in the urinary bladder (0.58 ± 0.06 vs. 0.76 ± 0.09 ml/sec) than those in group 2 after TURP. There was no significant difference about OABSS before TURP, age, resected prostatic weight and RI in the prostate and PI in the prostate and urinary bladder between patients in groups 1 and 2 after TURP.

Interpretation of results
Incomplete TURP will not decrease PCAR and might compromise the blood flow in the urinary bladder, which might deteriorate storage symptoms in BPH patients after TURP.

Concluding message
Patients with BPH who had higher OABSS 12 months after TURP had higher PCAR and lower RI in the urinary bladder than those who had lower or equal OABSS 12 months after TURP.

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Disclosures
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