296

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DOES ACUTE URINARY RETENTION INDICATE A POORER OUTCOME AFTER TRANSURETHRAL RESECTION OF THE PROSTATE IN PATIENTS WITH BPH?

Hypothesis / aims of study
Benign prostatic hyperplasia (BPH) is a progressive disease and animal studies have shown that bladder outlet obstruction (BOO) can lead to damage of the bladder. It is believed that acute urinary retention (AUR) is a severe form of BPH progression and suggests that patients presenting with AUR have a longer duration and/or a more severe form of BOO than in BPH patients without AUR. Therefore, it is plausible to predict that the recovery of lower urinary tract symptoms (LUTS) after surgical treatment would be worse in those patients presenting with AUR. The aim of the study was to compare with postoperative symptom score and urinary flow rate values between BPH patients presenting with or without AUR.

Study design, materials and methods
Between January 2010 and March 2011, BPH patients who underwent transurethral resection of the prostate (TURP) were included in the study excluding those with a neurogenic bladder, prostate cancer, or postoperative AUR. Thirty one patients with AUR and 64 without AUR were compared for PSA, prostate volume, pre- and postoperative symptoms (IPSS), uroflowmetry (UF) and postvoid residual urine volume (PVR) at least 6 months after surgery.

Results
PSA, prostate volume, and preop quality of life (QoL) score of the AUR group were higher than the non-AUR group. There was no statistically significant difference in the postoperative IPSS scores (total, storage, and voiding scores) between the two groups. Moreover, each IPSS category showed remarkably similar values including QoL.The Qmax was also similar between the groups and only the voided volume was lower in the AUR-group.

Table 1. Characteristics of groups

	Age(yr)	PSA(ng/ml)*	Prostate volume(ml)*
AUR	74.8±6.5	5.6±5.8	31.8±17.4
Non-AUR	70.9±7.0	2.3±3.1	16.3±14.6

Table 2. Postoperative IPSS

Question	1	2	3	4	5	6	7	QoL
AUR	1.3±1.3	2.2±1.0	1.6±1.2	1.7±1.3	2.1±1.4	1.2±1.3	1.9±1.0	2.5±1.1
Non-AUR	1.4±1.4	1.9±1.3	1.6±1.5	1.7±1.4	1.9±1.6	1.5±1.7	1.9±1.2	2.6±1.4

Table 3. Postoperative urinary flow rate and postvoid residual volume

	Qmax(ml/sec)	Voided Vol.(ml)*	PVR(ml)
AUR	13.9±5.6	172.1±104.0	23.7±60.5
Non-AUR	13.5±6.5	253.7±146.6	40.5±49.1

Interpretation of results
PSA and prostate volume are risk factors for AUR and they were higher in the AUR group in our study. However, surgical removal of obstruction in BPH patients resulted in similar improved symptom score, QoL, and Qmax values regardless of the presence of AUR. Although AUR can be regarded as the ultimate form of BPH progression, our results indicate that the presence of AUR does not increase the chance of a decompensated bladder. This is further supported by the remarkably similar values of all symptom categories between the groups. Although the voided volume during UF were significantly smaller in the AUR group, this does not seem to be clinically significant since all of the storage symptom categories between the 2 groups were similar.

Concluding message
Preoperative AUR does not seem to be an indicator for less improvement in symptom score, QoL, and Qmax values after TURP in patients with BPH.

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