

THE PREDICTIVE FACTORS FOR PEAK FLOW RATE AFTER TRANSURETHRAL RESECTION OF PROSTATE

Hypothesis / aims of study

Transurethral resection of prostate (TURP) is the gold standard treatment of benign prostatic hyperplasia (BPH) and give high satisfaction to patients. However, postoperative low urine flow is commonly observed. We analyzed patients' characteristics according to post TURP uroflowmetry.

Study design, materials and methods

From January 2006 to December 2012, 191 patients who underwent TURP in our hospital were included in this study. Their age, diabetes mellitus, hypertension, a history of stroke, prostate volume, preoperative prostate specific antigen (PSA), International Prostate Symptom Score (IPSS), preoperative medication period, a history of acute urinary retention (AUR), the volume of resected tissue were reviewed. Patients were divided into two groups by post TURP Qmax lesser than 10ml/s. More than five points of storage symptom score and more than four points of voiding symptom score were defined as dominant.

Results

The mean age of the patients were 71 years old. 122 cases (63.8%) were diabetes mellitus, 134 cases were (70.1%) hypertension, 78 cases (40.8%) of stroke were noted. Median prostate volume was 57gm (4-130), median PSA was 12.1ng/ml (0.2-1320). Storage symptom dominant cases were 47 (24.6%) and voiding symptom dominant cases were 94 (49.2%). 103 cases (48.1%) had BPH medication history over six months before surgery. 18 cases (9.4%) had acute urinary retention previously. The mean volumes of resected tissue were 11.1gm. 38 cases (19.9%) of the patients had post TURP Qmax lesser than 10ml/s (table).

Interpretation of results

They were older ($p = 0.040$), had diabetes mellitus ($p = 0.042$), had dominant storage symptom score ($p < 0.01$) and had not AUR history ($p = 0.043$) in multivariate analysis. However, prostate volume, PSA, preoperative medication period, hypertension, stroke and volume of resected tissue were not related to post TURP Qmax lesser than 10ml/s.

Concluding message

The patients who had low urinary flow rate post TURP was 19.9%. We must concern about older age, diabetes mellitus, dominant storage symptom score, and history of acute urinary retention when planning TURP.

Table. Clinical manifestations and demographics

Clinical manifestations	No. (%) / mean±SD		Univariate p-value	Multivariate p-value
	Qmax ≤ 10ml/s (n=153)	Qmax > 10ml/s (n=38)		
Age (yrs)	69±10.4	78±10.2	< 0.001	0.04
Prostate volume (gm)	57.0±23.5	58.0±22.7	0.071	N/A
PSA (ng/mL)	12.7±27.3	10.2±23.4	0.099	N/A
Resection volume (gm)	12.1±10.2	10.1±10.2	0.082	N/A
HTN	104 (70.0)	30 (80)	0.12	N/A
DM	106 (69.2)	16 (42.1)	0.008	0.042
Old CVA	58 (38.0)	20 (52.6)	0.42	N/A
AUR	16 (10.5)	2 (5.2)	0.03	0.043
BPH medication	79 (51.6)	24 (63.1)	0.51	N/A
IPSS				
Storage dominant	87 (58.9)	1 (2.6)	0.025	< 0.01
Voiding dominant	66 (41.1)	37 (97.4)		

CVA : Cerebro-vascular accident

IPSS : International prostate symptom score

SD : Standard deviation

AUR : Acute urinary retention

N/A : Not applicated

Disclosures

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