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TWELVE-YEAR SYMPTOMATIC OUTCOME OF TRANSURETHRAL RESECTION OF THE PROSTATE FOR PATIENTS WITH LOWER URINARY TRACT SYMPTOMS BY PROSTATIC ENLARGEMENT COMPARED TO THE PREOPERATIVE URODYNAMIC FINDINGS

Hypothesis / aims of study

Transurethral resection of the prostate (TURP) is an effective surgical procedure for treatment of lower urinary tract symptoms (LUTS) by prostatic enlargement, especially for patients with bladder outlet obstruction (BOO). However, whether TURP should be avoided for patients without BOO or those with detrusor underactivity (DUA) is controversial. Previously we reported the urodynamic characteristics of 92 patients with LUTS by prostatic enlargement who underwent TURP and the short-term efficacy of TURP compared to the preoperative urodynamic findings.[1] Although the overall treatment efficacy of TURP was better for patients with BOO than for those without it, neither the presence of detrusor overactivity (DO) nor status of detrusor contractility affected the efficacy at 3 months after surgery. Thus, we suggested that TURP might not be contraindicated for patients with DUA, at least to achieve a favorable short-term outcome. However, our previous study did not demonstrate the long-term outcome of TURP. In the present study, we investigated whether the efficacy of TURP lasted for a long term of more than 10 years in comparison to the preoperative urodynamic findings.

Study design, materials and methods

Ninety-two patients with LUTS by prostatic enlargement aged 50 or older underwent TURP between July 1995 and March 1997. Before TURP, the patients underwent symptomatic examination using the International Prostate Symptom Score (IPSS) and Quality of Life (QOL) index. In addition, water filling cystometry and pressure-flow study were performed before surgery to evaluate the existence of DO, the degree of BOO and the status of detrusor contraction. If involuntary detrusor contraction was observed during the filling phase, it was defined as DO. LinPURR scores of 2 to 6 and weak/very weak contractility on the Schäfer's nomogram were defined as BOO and DUA, respectively. Of the 92 patients, 43 (46.7%) were alive at the time of the survey in February 2008. Nine patients were excluded because of prostate cancer, neurological diseases and the impossibility of symptomatic examination. The IPSS and QOL index were determined at baseline, 3 months, 3 years, 7 years and 12 years after surgery for 34 patients.

Results

Although the improved IPSS and QOL index at 3 months gradually deteriorated as time passed, those at 12 years were still significantly better than those at baseline (Table 1, 2)**.** The IPSS in patients without BOO deteriorated faster than in those with it, whereas neither DUA nor DO influenced the IPSS slope. Regardless of the preoperative urodynamic findings, the QOL index remained improved for 12 years. Two-thirds of patients with DUA but not BOO were satisfied with their urinary condition at 12 years.

Interpretation of results

The symptomatic improvement provided by TURP lasts for over 10 years, although there is gradual deterioration with the passage of time. The QOL index remained improved for 12 years regardless of the preoperative urodynamic findings.

Concluding message

There are no reasons to hesitate to use TURP for most patients with LUTS by prostatic enlargement if it is clinically indicated.

Reference

[1] Int J Urol (2006), 13: 1398-1401.

Table 1

Changes in the IPSS after TURP compared with preoperative urodynamic findings

IPSS	baseline	3 months [2)]	3 years [2)]	7 years [2)]	12 years [2)]	annual slope[3)]	p-value [4)]
All patients	16.7 (34) [1)]	4.1*** (34)	5.6*** (30)	8.1*** (28)	9.9** (34)	0.48	
without BOO	13.5 (16)	4.9*** (16)	7.5** (14)	10.0 (13)	14.2 (16)	0.77	0.029
with BOO	19.5 (18)	3.5*** (18)	3.9*** (16)	6.5*** (15)	6.1*** (18)	0.22	
without DUA	18.5 (22)	3.6*** (22)	4.7*** (18)	9.1** (18)	9.8** (22)	0.52	0.693
with DUA	13.3 (12)	5.2*** (12)	6.9** (12)	6.5** (10)	10.1 (12)	0.41	
without DO	16.0 (20)	5.1*** (20)	6.6*** (18)	9.2* (17)	12.3 (20)	0.60	0.273
with DO	17.7 (14)	2.8*** (14)	4.1*** (12)	6.5** (11)	6.5** (14)	0.31	

1) Mean (No. of patients), 2) vs. baseline: *p < 0.05, **p < 0.01, ***p < 0.001, 3) Difference between 3 months and 12 years divided by 12

Table 2

Changes in the QOL index after TURP compared with preoperative urodynamic findings

QOL index	baseline	3 months [2)]	3 years [2)]	7 years [2)]	12 years [2)]	annual slope [3)]	p-value [4)]

All patients	4.6 (34) [1)]	1.5*** (34)	1.9*** (30)	2.2*** (28)	2.2*** (34)	0.063	
without BOO	4.3 (16)	1.8*** (16)	2.2*** (14)	2.5*** (13)	2.8** (16)	0.080	0.529
with BOO	4.9 (18)	1.2*** (18)	1.7*** (16)	1.9*** (15)	1.7*** (18)	0.048	
without DUA	4.8 (22)	1.3*** (22)	2.0*** (18)	2.2*** (18)	2.2*** (22)	0.076	0.456
with DUA	4.3 (12)	1.8** (12)	1.8*** (12)	2.1*** (10)	2.2** (12)	0.037	
without DO	4.7 (20)	1.6*** (20)	2.2***(18)	2.5*** (17)	2.6*** (20)	0.081	0.380
with DO	4.6 (14)	1.3*** (14)	1.6*** (12)	1.7*** (11)	1.7*** (14)	0.036	

1) Mean (No. of patients), 2) vs. baseline: *p < 0.05, **p < 0.01, ***p < 0.001, 3) Difference between 3 months and 12 years divided by 12

References
1. Int J Urol (2006), 13: 1398-1401

Specify source of funding or grant	**none.**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**The original work was performed between 1995 and 1997. The IRB was not available at that time.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**