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THE IMPACT OF BLADDER OUTLET OBSTRUCTION ON URINARY QUALITY OF LIFE INDEXES FOLLOWING RADICAL PROSTATECTOMY.

Hypothesis / aims of study

Previous studies have suggested that patients with large prostate volume are likely to experience an improvement in urinary symptoms and urinary bother after radical prostatectomy (RP) for a localized prostate cancer. We estimated the impact of bladder outlet obstruction on urinary quality of life (QOL) indexes following RP.

Study design, materials and methods

Between July 2006 and March 2008, 32 patients who underwent RP were prospectively evaluated. Bladder outlet obstruction was assessed by pressure flow study before RP and urinary health related QOL was assessed preoperatively and 6 or 12 months after RP using the validated Expanded Prostate Cancer Index Composite (EPIC) questionnaire. We stratified the 32 patients into 2 groups by bladder outlet obstruction grade of Schäfer nomogram. Group A included 21 patients with Schäfer nomogram grade 2 or less and group B included 11 patients with grade 3 or more.

Results

Preoperative prostate volume estimated by transrectal ultrasound was 26.9±14.6 mL and 30 ±10.4 mL in group A and B, respectively without a statistical significance. Preoperative and postoperative EPIC urinary QOL scores are shown in Table 1. Preoperatively baseline scores did not differ significantly between the 2 groups. At 6 or 12 months after RP, patients in group B had a significant improvement in urinary bother (UB), urinary irritation/obstruction (UIR) and urinary summary score (U) compared to the baseline scores (P<0.01, P<0.01, P<0.05). In group A, urinary function (UF) and urinary incontinence (UIN) subscale scores were significantly deteriorated after RP compared to the baseline scores (P<0.05). In group A, there was no significant improvement after RP in any of EPIC urinary QOL scores compared to the baseline.

Interpretation of results

This study shows that the improvement of urinary symptoms and bother in patients who underwent RP correlates with the degree of bladder outlet obstruction. Thus, in addition to prostate volume, preoperative urodynamic evaluation of bladder outlet obstruction may provide additional predictive information on postoperative urinary function when counselling patients who are candidates of RP.

Concluding message

Preoperative bladder outlet obstruction has a significant impact on urinary QOL indexes following RP. Preoperative urodynamic evaluation can contribute to predict urinary function after RP. Patients without bladder outlet obstruction should be informed of possible deterioration of urinary function and QOL after RP.

Table 1 Preoperative and postoperative urinary function by EPIC urinary domain summary and subscale scores stratified by bladder outlet obstruction grade (Group A: Schäfer nomogram grade 2 or less, Group B: Schäfer nomogram grade 3 or more). UF: urinary function, UB: urinary bother, UIR: urinary irritation/obstruction, UIN: urinary incontinence, U: urinary summary score.

functional domain group	Mean scores (% return to baseline)			References
	baseline	6 or 12 months after RP	vs baseline	
UF	A	95.3	85.8 (90.3%)	P<0.05
	B	94.3	90.8 (96.3%)	
UB	A	85.1	85.7 (101%)	P<0.01
	B	86.1	95.4 (111%)	
UIR	A	88.5	92.0 (104%)	P<0.01
	B	91.4	98.2 (107%)	
UIN	A	94.6	77.0 (81.4%)	P<0.05
	B	92.1	86.1 (93.5%)	
U	A	87.2	85.5 (98.1%)	P<0.05
	B	90.1	93.5 (104%)	
Specify source of funding or grant			None	
Is this a clinical trial?			No	
What were the subjects in the study?			HUMAN	
Was this study approved by an ethics committee?			Yes	
Specify Name of Ethics Committee			The ethical committee of Asahikawa Medical College	
Was the Declaration of Helsinki followed?			Yes	
Was informed consent obtained from the patients?			Yes	

1. J Urol
(2008) 179; 1818-1822