

INCONTINENCE AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY-- THE PREDICTORS OF EARLY RECOVERY AND VIDEURODYNAMIC CHANGES

Hypothesis / aims of study

Although laparoscopic radical prostatectomy (LRP) is effective in treatment of localized prostate cancer, patients might suffer from stress urinary incontinence (SUI) after LRP. This study investigated the changes of videourodynamic parameters after LRP and impact on urinary incontinence

Study design, materials and methods

A total of 48 male patients underwent LRP. Among them, 32 patients received videourodynamic study (VUDS) at baseline, 3 months and 6 months after operation. The changes of urodynamic parameters including detrusor pressure (Pdet), voided volume, cystometric bladder capacity (CBC), maximum flow rate (Qmax), postvoid residual (PVR), maximal urethral closure pressure (MUCP) and functional profile length (FPL) were measured at 3 and 6 months after operation. The bladder neck (BN) level to the superior margin of the symphysis pubis (SMSP) after LRP was also measured 7 to 10 days after operation by retrigade cystography. The BN level at or above SMSP was defined as 0, and BN level below SMSP more than 2 cm was defined as -2, otherwise, the BN level was -1. The SUI condition was evaluated by questionnaire during out-patient clinic follow up.

Results

Table 1. The relationship of bladder neck levels and SUI at different time points

BN level	SUI at 3M	SUI at 6M	SUI at 12M
0 (n=9)	2 (22.2%)	1 (11.1%)	0
-1 (n=24)	17 (70.8%)	12 (50%)	4 (16.7%)
-2 (n=15)	13 (86.7%)	10 (66.7%)	4 (26.7%)
Total (n=48)	32 (66.7%)	23 (47.9%)	8 (16.7%)
P value	0.04	0.03	0.23

Table 2. The relationship of MUCP at 3 months after operation and SUI at different time points

N=48	SUI rate	MUCP(cmH ₂ O)
SUI at 3M (n=32)	66.7%	40.1±12.1
Non-SUI at 3M (n=16)		52.7±13.3
p value		0.017
SUI at 6M (n=23)	47.9%	38.7±9.8
Non-SUI at 6M (n=25)		49.7±14.9
p value		0.034
SUI at 12M (n=8)	16.7%	34.5±7.73
Non-SUI at 12M(n=40)		47.0±14.0
p value		0.049

Interpretation of results

The overall SUI rate was 66.7%, 47.9%, and 16.7% at 3, 6, 12 months after LRP, respectively.

MUCP, FPL and Pdet significantly declined from 62.6cmH₂O, 48.7mm and 41.8cmH₂O, which was measured at baseline, to 46.4cmH₂O, 16.8mm and 25.4cmH₂O at 6 months, respectively.

Among patients with SUI at 3 months and 6 months after operation, the MUCP level at 3 months and bladder neck level were significantly lower than patients without SUI. For patients with prolonged SUI (12 months postoperatively), the MUCP at 3 months showed significant association. (Table.1 and Table. 2)

Concluding message

BN level and MUCP can strongly predict the early continence recovery after LRP. The BN level not below the symphysis pubis and higher MUCP level at 3 months after operation are associated with an early recovery of SUI after LRP.

References

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Disclosures

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