

1113

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THE BLADDER FUNCTION CHANGES AFTER TRANSVAGINAL PELVIC RECONSTRUCTIVE SURGERY USING PROLIFT TECHNIQUE FOR PELVIC ORGAN PROLAPSE

Hypothesis / aims of study

To evaluate the bladder function changes after transvaginal pelvic reconstructive surgery using Prolift™ system for POP after short-term follow-up.

Study design, materials and methods

Between Oct 2005 and March 2009, 71 women underwent transvaginal pelvic floor repair with total Prolift™ system (Ethicon, Sommerville, NJ, USA) in Mackay Memorial Hospital due to symptomatic POP were enrolled in this study. Investigations included personal history, urinalysis, pelvic examination with a Sim's speculum, a complete multi-channel urodynamic study (UDS) which contains a free uroflowmetry, filling and voiding cystometry as well as urethral pressure profilometry pre- and postoperatively. The severity of prolapse was measured according to the Pelvic Organ Prolapse Quantification system (POP-Q). The impact of quality of life (QoL) was investigated by short form of Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaires (IIQ-7).

Results

Comparison of urodynamic parameters before and after Prolift procedure (N=71)

Variables	Preoperation	Postoperation	P
Uroflowmetry			
VV (ml)	249.6 ± 111.5	235.2 ± 77.5	0.31
MFR (ml/s)	15.3 ± 7.6	14.7 ± 6.8	0.51
AFR (ml/s)	7.5 ± 4.0	7.2 ± 3.4	0.57
Residual urine (ml)	68.2 ± 86.8	39.9 ± 44.6	0.007
Filling cystometry			
FS (ml)	220.4 ± 78.5	203.8 ± 58.0	0.064
ND (ml)	304.7 ± 103.3	275.6 ± 80.7	0.013
SD (ml)	392.5 ± 121.6	333.4 ± 102.6	<0.001
MBC (ml)	403.7 ± 117.9	345.6 ± 95.0	<0.001
Voiding cystometry			
P det (cmH ₂ O)	21.9 ± 19.0	16.7 ± 8.9	0.02
Urethral pressure profile			
FUL-r	2.3 ± 0.4	2.4 ± 0.5	0.43
FUL-s	2.5 ± 0.6	2.5 ± 0.5	0.78
MUP (cmH ₂ O)	77.1 ± 24.1	68.8 ± 19.9	0.002
MUCP-r (cmH ₂ O)	58.1 ± 24.2	50.2 ± 21.3	0.008
MUCP-s (cmH ₂ O)	75.1 ± 50.5	53.3 ± 29.6	<0.001

Interpretation of results

The mean age was 61.1±11.4 years and mean parity was 3.3±1.5. The follow-up duration ranged from 6 to 32 months with a median of 19 months. The preoperative POP-Q stages included stage II in 18 subjects, stage III in 37 and IV in 16. Two patients failed in Prolift procedure with postoperative stage II cystocele. The anatomic cure rate was 97%. Comparison of UD parameters revealed reduced postvoid residual, normal desire, strong desire and maximal bladder capacity with statistical significance. For the urethral pressure profilometry, both maximal urethral pressure and maximal urethral closure pressure decreased significantly after operation. Improvement on quality of life was also noted according to the scores of UDI-6 and IIQ-7.

Concluding message

The short-term outcome of POP surgery using Prolift™ system showed an excellent anatomic success rate after 19 months of follow-up. The impact on QoL related to the procedure also showed favorable results. The UDS findings yielded negative impacts on storage function with impaired bladder capacity and improvement of emptying function. More subjects and long-term follow-up are demanded for further conclusion.

References

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<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Institutional Review Board of Mackay Memorial Hospital, Taipei, Taiwan
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes