

URINARY FUNCTION AND QUALITY OF LIFE BEFORE AND AFTER ROBOT-ASSISTED PELVIC PROLAPSE SURGERY.

Hypothesis / aims of study

Micturition problems are highly associated with prolapse¹ and have a high impact on quality of life. However, prospective research describing micturition outcomes after robot-assisted prolapse surgery is non existing. As robot-assisted prolapse surgery is growing immensely, studies on micturition symptoms after such surgery is essential.

Study design, materials and methods

All consecutive patients undergoing a robot-assisted sacrocolpopexy (RASC) or a robot-assisted supracervical hysterectomy with a cervicosacropexy (RSHC) in a large teaching hospitals with a tertiary referral function for patients with gynaecological prolapse were prospectively included. Patients undergoing concomitant incontinence surgery were excluded. The validated questionnaire 'Urogenital Distress Inventory' (UDI-6)² was used to describe pre- and postoperative micturition symptoms. For the definition of stress urinary incontinence (SUI) (question 3) "leakage related to activity, coughing or sneezing" was used. A higher score indicates more severe lower urinary tract dysfunction (range 0-100). The 'Incontinence Impact Questionnaire' (IIQ-7)² was used to describe pre- and postoperative quality of life. A higher score indicates a lower quality of life (range 0-100).

Results

One hundred and forty-two patients were operated. Ten patients (7.0%) were lost to follow-up. The median follow-up was 15.7 months (range 8.2-44.4). The baseline demographics and surgical details are listed in table 1. Table 2 shows the pre- and postoperative simplified pelvic organ prolapse quantification (POPQ)³.

Ninety-two (70.0%) patients filled in a pre- and postoperative UDI-6 questionnaire, which showed a significant improvement in total urinary distress score (Table 3; $p < 0.0005$). Analysing SUI and the domains of overactive bladder (OAB) and obstructive micturition a significant improvement in obstructive urinary symptoms (Table 3; $p < 0.0005$) was noted. No difference in SUI was found.

In Table 4 the IIQ-7 scores are depicted. Seventy-nine patients (59.8%) answered both pre- and postoperative the questionnaire, showing a significant improvement of the impact of urinary incontinence on quality of life.

Table 1. Patient demographics and surgical details

Mean age (range)	62.0 (32-85)
Mean BMI ¹ (range)	26.1 (19.6-37.8)
Mean para (range)	2.7 (0-7)
Postmenopausal %	84.1
History (%)	
- Hysterectomy	38.6
- Previous POP ² /incontinence surgery	41.7
- Intra-abdominal surgery total ³	60.6
Technique used (%)	
- RASC ⁵	38.6
- RSHC ⁶	61.4
Concomitant surgery, N (%)	
- Oophorectomy (single/bilateral)	9 (6.8)
- Anterior/posterior colporrhaphy	13 (9.8)
- Other	2 (1.5)

1. BMI: Body Mass Index. 2. POP: Pelvic Organ Prolapse. 3. Including vaginal hysterectomy. 4. Simpl. POPQ: simplified Pelvic Organ Prolapse Quantification. 5. RASC: robot-assisted sacrocolpopexy. 6. RSHC: robot-assisted supracervical hysterectomy with cervicosacropexy.

Table 2. Pre-and postoperative simplified pelvic organ prolapse quantification³.

Anatomic landmark	A				B				C				D			
POPQ stage	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Preoperative (%)	9	19	44	28	40	30	12	18	8	23	42	27	43	27	2	28
Postoperative (%)	80	14	5	1	99	1	-	-	100	-	-	-	100	-	-	-

Abbreviation: POPQ: pelvic organ prolapse quantification.

Table 3. Pre- and postoperative UDI-6 scores.

UDI-6 (N=92)	Preoperative; mean	Postoperative; mean	p-value ¹
OAB	29.6	27.2	0.412
SUI	21.7	23.9	0.488
Obstructive micturition	33.3	13.2	0.0005
Total score²	29.7	21.2	0.0005

1.Paired sample T-test. 2.Total score is transformed to a 0-100 point scale. Higher scores indicate more symptom distress. Abbreviations: OAB: overactive bladder. SUI: stress urine incontinence. UDI: urine distress inventory.

Table 4. Pre- and postoperative IIQ-7 scores.

IIQ-7 (N=79)	Preoperative; mean	Postoperative; mean	p-value ¹
Total score²	23.9	6.1	0.0005

1.Paired sample T-test. 2.Total score is transformed to a 0-100 point scale. Higher scores indicate more symptom distress. Abbreviation: IIQ-7: Incontinence Impact Questionnaire.

Interpretation of results

Regarding UDI-6 scores, the obstructive subscale (UDI-5 and UDI-6) improved significantly indicating a successful correction of the obstructing prolapse. RASC or RSHC did not improve or worsened in total symptoms of stress urinary incontinence OAB symptoms. 6.1% Of all patients had to be re-operated due to de novo stress-incontinence. Significant improvement on the IIQ-7 scores were found.

Concluding message

Obstructive micturition symptoms and the overall quality of life improved in women who underwent robot-assisted prolapse surgery.

References

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3. Swift S, Morris S, McKinnie V, et al. Validation of a simplified technique for using the POPQ pelvic organ prolapse classification system. *Int Urogynaecol J Pelvic Floor Dysfunct*. 2006;17(6):615-620.

Disclosures

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