

**Aims of study**

Robot-assisted prolapse surgery is growing immensely, studies on micturition symptoms after such surgery is essential, but until now non-existing. This prospective study describes micturition outcomes after robot-assisted pelvic organ prolapse (POP) surgery.



**Materials & Methods**

**Patients:** All patients undergoing a robot-assisted sacrocolpopexy (RASC) or a robot-assisted supracervical hysterectomy with a sacrocervicopexy (RSHC), without concomitant incontinence surgery.  
**Setting:** Tertiary referral hospital for prolapse surgery.  
**Materials:** The validated questionnaires 'Urogenital Distress Inventory'(UDI-6)<sup>1</sup> and 'Incontinence Impact Questionnaire' (IIQ-7)<sup>1</sup> were used to describe pre- and postoperative micturition symptoms and quality of life respectively. For the definition of stress urinary incontinence (SUI), question 3, "leakage related to activity, coughing or sneezing" was used.

**Results**

Ten (7%) of the 142 patients were lost to follow-up. The median follow-up time was 15.7 months (range 8.2-44.4).

Figure 1 shows the pre- and postoperative simplified pelvic organ prolapse quantification (simplified POP-Q)<sup>2</sup>.

**UDI-6/IIQ-7**

Seventy percent of patients (N=92) filled in a pre- and postoperative UDI-6 questionnaire, which showed a significant improvement in total urinary distress score and in the subdomain obstructive urinary symptoms (Table 2). No difference in stress urinary incontinence (SUI) was found. Six percent of all patients had to be re-operated due to de novo SUI. A significant improvement of IIQ-7 scores was seen (N=79).

Table 1. Baseline demographics & surgical details	N = 142
Mean age (range)	62.0
Mean BMI (range)	26.1
Postmenopausal %	84.1
History, %	
- Hysterectomy	38.6
- Previous POP/incontinence surgery	41.7
Technique used, %	
- RASC	39
- RSHC	61
- Concomitant surgery (e.g. Oophorectomy; anterior/posterior colporrhaphy)	18

Fig 1. Functional outcome

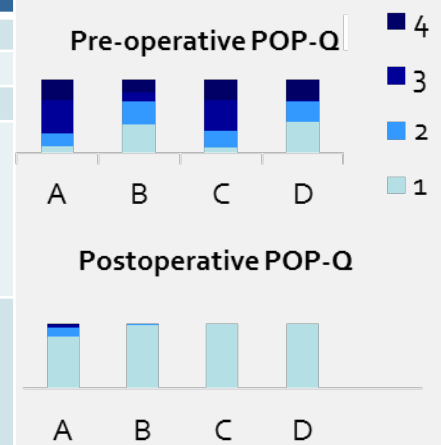


Table 2. Questionnaire	Baseline mean	Follow-up mean	p-value*
UDI-6*, total	29.7	21.2	<b>0.0005</b>
-OAB <sup>†</sup>	29.6	27.2	0.412
-SUI	21.7	23.9	0.488
-Obstructive	33.3	13.2	<b>0.0005</b>
IIQ-7*, total	23.9	6.1	<b>0.0005</b>

\*A higher score indicates more severe lower urinary tract dysfunction (range 0-100). <sup>†</sup>OAB: overactive bladder. \*A higher score indicates a lower quality of life (range 0-100). \*Paired sample T-test

**Interpretation of results**

Regarding UDI-6 scores, the obstructive subdomain (UDI-5 and UDI-6) improved significantly, indicating a successful correction of the obstructing prolapse. RASC or RSHC did not improve or worsened SUI or OAB symptoms. Patients should be counselled about de novo SUI and a possible reoperation. A significant improvement in quality of life was found.

**Concluding message**

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

**References**

- Utomo E, Korfage IJ, Wildhagen MF, Steensma AB, Bangma CH, Blok BFM. Validation of the Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) in a Dutch population. *Neurourol Urodyn.* 2015 Jan;34(1):24-31.
- Swift S, Morris S, McKinnie V, et al. Validation of a simplified technique for using the POPQ pelvic organ prolapse classification system. *Int Urogynecol J Pelvic Floor Dysfunct.* 2006;17(6):615-620.