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Aims of study

There are currently few studies about the effects of pelvic organ prolapse (POP) surgery on lower urinary tract (LUT) function using urodynamics.

The main **aim** of this *observational* study was to evaluate the vesico-sphincter function modifications after surgery for POP.

Study design, materials and methods

33 women affected by POP requiring surgery have been *prospectively* included. Patients underwent detailed history, physical examination and urodynamics before and 6 months after surgery.

- **Primary end-points:** changes in urodynamic parameters evaluated with Blaivas-Groutz nomogram and projected isovolumetric detrusor pressure (PIP1)
- **Secondary end-points:** changes in clinical and anatomical parameters

Results

At baseline, POP III e POP II were detected in 22 (66.7%) and in 13 (33.3%) pts, respectively.

Abdominal and vaginal approaches were performed in 21 pts (63.6%) and 12 pts (36.4%), respectively.

- **Primary end-points** are shown in the *Tables 1 and 2.*

<u>Table 2</u>	Baseline	6 mos follow up	p
Free Qmax (ml/s)	11,3±7,95	19,5±16,8	0,014
PVR (ml)	53±52	27,4±55,4	0,024
DO (n)	12 (36,4%)	16 (48,5%)	0,424
Leakage (n)	13 (39,4%)	12 (36,3%)	0,450
Opening Pdet (cmH ₂ O)	22,18±18,9	19,33±18,07	0,249
Pdet max (cmH ₂ O)	38,27±28,9	29,36±18,39	0,041
PdetQmax (cmH ₂ O)	25,58±22,86	21,12±16,19	0,235
UDS Qmax (ml/s)	14,33±6,71	18,76±10,38	0,006
UDS PVR (ml)	59,7±95,27	43,03±55,76	0,647

Secondary end-points:

- ✦ excellent *restitutio ad integrum*, especially for cystocele and urethrocele (p=0,000)
- ✦ statistically significant reduction of vaginal bulge (p=0,000), voiding LUTS (p=0,001) and UI (p=0.039)
- LUTS de novo was observed in 2 patients, urgency in 5 patients and urinary incontinence in 1 patient
- Abdominal approach gave better results in urodynamic and clinical parameters.

Interpretation of results

In order to optimally evaluate pre- and postoperative bladder function, we need studies with standardised or validated outcome measures, evaluating urodynamic parameters. Our results show that detrusor contractility and Qmax drastically improve 6 months after POP surgery, especially with an abdominal approach.

Conclusions

This study shows that **voiding conditions greatly change** in patients who underwent to POP surgery, with a trend to BOO resolution and restoration of a normal detrusor strength 6 months after surgery.

Disclosures Statement:

I have no potential conflict of interest to report.

<u>Table 1</u>	Baseline no. pts (%)	6 mos follow up no. pts (%)
Detrusor contractility strenght (PIP1)		
Reduced (< 30 cmH ₂ O)	25 (75.8)	17 (51.5)
Normal (30-75 cmH ₂ O)	8 (24.2)	16 (48.5)
BOO (Blaivas-Groutz Nomogram)		
No obstruction	11 (33.3)	20 (62.5)
Mild obstruction	18 (54.6)	11 (34.4)
Moderate obstruction	3 (9.1)	1 (3.1)
Severe obstruction	1 (3)	0