

Urinary continence function after vaginal surgery for pelvic organ prolapse.

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Introduction

- Women who underwent a POP surgery are at risk of developing urinary incontinence (UI).
- The prevalence of de novo UI is not well established.
- Combined procedure of POP and anti-incontinence surgeries may be associated to some complications.

Aims

1. To know the incidence of **persistent**, **de novo** and **cure** of UI in patients undergoing vaginal POP surgery.
2. To describe the predictive factors for the onset of urinary incontinence after POP surgery. Construct a SUI prognostic model.

Methods

- Prospective multicentre descriptive study.
- 14 participating centres.
- Primary outcome: presence of SUI or UUI 1-year after surgery.
- SUI predictive model: all-possible-models approach according to Mallows' Cp criterion

Results

611 analyzable women.

Age	67 [57 – 74]
Family history of UI	87 (13.2%)
Race	
Caucasian	577 (87.6%)
Hispanic	64 (9.7%)
Previous SUI surgery	20 (3.0%)
Preoperative SUI	177 (26.9%)
Preoperative UUI	229 (34.7%)
Sandvik	6 [3 – 8]
ICIQ-SF	12 [8 – 15]

Surgical compartment	
Anterior	519 (78.8%)
Apical	420 (63.7%)
Posterior	91 (13.8%)
POP stage	
II	177 (26.9%)
III	357 (54.2%)
IV	104 (15.8%)
Concomitant SUI surgery	30 (4.6%)
TOT	30

1-year Stress Urinary Incontinence

- SUI prevalence: 13.3%
- **De-novo** SUI: 8.3%
- **Cure** of previous SUI: 70.1%
- New surgery for SUI 0.6% (n=4)
- **Prognostic model**: prior SUI, Previous POP surgery, Family history (AUC=0.752)

1-year Urge Urinary Incontinence

- UUI prevalence: 21.1%
- **De-novo** UUI: 8.9%
- **Cure** of previous UUI: 57.7%
- Associated TOT → UUI 30.0% vs 8.3% (p<0.001)

	Stress Urinary Incontinence		Urge Urinary Incontinence	
	Univariate OR (CI 95%)	Multivariate OR (CI 95%)	Univariate OR (CI 95%)	Multivariate OR (CI 95%)
Age	0.99 (0.97 – 1.01)		1.04 (1.02 – 1.06)	1.04 (1.00 – 1.01)
Body mass index	1.03 (0.97 – 1.08)		1.09 (1.05 – 1.14)	1.01 (0.94 – 1.10)
Parity	0.97 (0.78 – 1.21)		1.10 (0.93 – 1.31)	
Vaginal deliveries	0.91 (0.73 – 1.34)		1.16 (0.98 – 1.38)	
Menopause	0.97 (0.51 – 1.39)		1.68 (0.92 – 3.08)	
Diabetes	1.34 (0.74 – 2.43)		1.96 (1.21 – 3.16)	1.49 (0.63 – 3.52)
COPD	0.87 (0.33 – 2.28)		0.87 (0.39 – 1.93)	
Family history of UI	2.59 (1.47 – 4.57)	2.29 (1.19 – 4.38)	2.15 (1.29 – 3.59)	1.61 (0.73 – 3.58)
Race				
Caucasian	1	1	1	
Hispanic	2.53 (1.31 – 4.91)	2.28 (1.05 – 4.94)	0.43 (0.18 – 1.04)	
Maghrebi	0.00 (0.00 –)		0.00 (0.00 –)	
Other	0.00 (0.00 –)		0.00 (0.00 –)	
Previous POP surgery	0.22 (0.05 – 0.93)	0.13 (0.02 – 0.94)	1.84 (1.01 – 3.34)	1.22 (0.44 – 3.42)
Previous IUE surgery	0.88 (0.20 – 3.91)		4.44 (1.68 – 11.76)	4.55 (0.40 – 51.17)
Urethral hypermobility	1.73 (1.06 – 2.83)	0.97 (0.54 – 1.23)	1.16 (0.78 – 1.77)	
Preoperative SUI	4.12 (2.54 – 6.68)	6.16 (2.73 – 13.91)	2.79 (1.85 – 4.21)	6.16 (2.73 – 13.91)
Preoperative IUU	1.55 (0.96 – 2.51)	1.29 (0.54 – 3.06)	7.91 (5.01 – 12.3)	1.29 (0.54 – 3.06)
Sandvik	0.94 (0.85 – 1.04)		1.26 (1.15 – 1.38)	1.13 (0.96 – 1.33)
ICIQ-SF	0.97 (0.91 – 1.03)		1.15 (1.08 – 1.22)	1.05 (0.94 – 1.18)
Anterior compartment surgery	1.02 (0.57 – 1.83)			
Concomitant SUI surgery	0.76 (0.23 – 2.59)			

Conclusion

- Rate of UI after vaginal POP surgery is low.
- Few women require further surgery for SUI.
- Both SUI and UUI could be cured after POP surgery.