

MANAGEMENT OF URINARY INCONTINENCE FOLLOWING SUB-URETHRAL SLING REMOVAL

Hypothesis / aims of study

We sought to evaluate de novo and persistent urinary incontinence outcomes following synthetic sub-urethral sling removal (SSR) in women.

Study design, materials and methods

We reviewed a prospectively maintained database of 360 consecutive women who underwent SSR between 2005 and 2015. We excluded patients who had neurogenic bladder, non-synthetic or multiple slings, prior mesh for prolapse, concomitant surgery at the time of sling excision, urethral erosion or urethrovaginal fistula, post-operative retention, or less than 6 months follow-up. Demographics, type of sling, indications for removal, time to removal, and patient-reported outcomes were recorded. All SSR were performed transvaginally under general anesthesia with removal of as much sling as possible. [1] Post-operative outcomes were stratified by type of incontinence (stress-predominant (SUI), urge-predominant (UUI), and mixed (MUI)). Subsequent management (observation/medications, minimally-invasive intervention (urethral bulking agent, sacral neuromodulation, onabotulinumtoxinA injection), or more invasive surgery (sling, bladder suspension)) was evaluated. Success or “dry” was defined by response of 0 (none) or 1 (rarely) on UDI-6 questions 2 and 3 and self-reported satisfaction with continence at last visit, and no further anti-incontinence intervention.

Results

99 patients met study criteria. Mean follow-up was 24 months (range 6-114). Mean duration from sling placement to SSR was 58 months (range 5-156). Median age and BMI were 55 years and 25.3 kg/m², respectively. 78% underwent prior hysterectomy and 64% were post-menopausal. 71% of slings were retropubic. Of 99 women, 27 (27%) denied any subjective leakage following SSR alone, while 72 (73%) experienced some degree of incontinence post-operatively: 26 with SUI (7 persistent, 19 de novo), 14 with UUI (6 persistent, 8 de novo), and 32 with MUI (13 persistent, 19 de novo). However, following a single minimally-invasive intervention, success rates rose to 81% in women with SUI, 86% in those with UUI, and 75% in those with MUI (Table).

Interpretation of results

Patients undergoing SSR may experience cure ($\geq 25\%$) or de novo or persistent urinary incontinence, with a higher predilection for UUI or MUI. However, after a single minimally-invasive intervention following SSR, success rates reached 75-85%.

Concluding message

Although urinary incontinence is not uncommon after SSR, additional minimally invasive interventions can often help gaining satisfactory continence outcomes in the majority of women. These results may guide patient counseling and expectations following SSR.

Table. Management outcomes based on type of urinary incontinence after SSR.

	SUI	UUI	MUI
# of patients	26	14	32
Initial management	Observation/ PFPT: 13 Bulking agent: 13	Observation/ medications: 11 OnabotulinumtoxinA: 1 Sacral neuromodulation: 1 Bladder suspension: 1	Observation/ medications/PFPT: 17 Bulking agent: 10 OnabotulinumtoxinA: 3 Bladder suspension: 2
Mean time to 1 st subsequent intervention \pm SD (mos.)	10.6 \pm 5.2	13.7 \pm 9.1	11.5 \pm 4.2
# of patients requiring 2 or more interventions	5	1	6
Success rate after no additional interventions (%)	50	79	53
Success rate after one minimally-invasive intervention (%)	81	86	75

Abbreviations: PFPT: pelvic floor physical therapy; SD: standard deviation

References

1. Dillon BE, Gurbuz C, Zimmern PE. Canadian Journal of Urology 19: 6424, 2012

Disclosures

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