

# Artificial urinary sphincter in women with recurrent stress urinary incontinence

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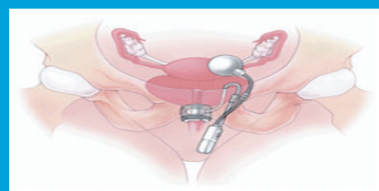
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## INTRODUCTION AND OBJECTIVES

Stress urinary incontinence (SUI) is a disabling condition and has a significant impact on quality of life. Recurrent SUI after synthetic or autologous sling surgery can be challenging due to a reduced success rate and an higher risk of complications. The literature regarding the artificial urinary sphincter (AUS) in women is limited. The goal of this descriptive study is to get insight into functional outcome, patient satisfaction and quality of life after AUS placement in female patients with recurrent SUI.

## MATERIAL AND METHODS

A retrospective study was performed by analyzing female patients who received an AUS between 2011 and 2017. Procedures were performed by a single urologist, in an academic functional, reconstructive and neurourology referral centre. Patients with SUI and at least one incontinence procedure prior to the AUS placement were included. Post-operative incontinence was quantified by daily pad usage and was compared to pad use prior to the procedure. Patient satisfaction was evaluated by a survey and was scored on a five-point scale (0 = unsatisfied, 4 = very satisfied). The post-operative symptom burden was measured using the Urogenital Stress Inventory (UDI-6), the quality of life was measured by use of the Incontinence Impact Questionnaire (IIQ-7). Both instruments have been validated for assessment of incontinence in women.



Female sphincter implantation, source: Chartier-Kastler 2007

Patient characteristics		Female patients (N = 13)
Age (years), average (SD)		64.5 (5.9)
Duration of incontinence until implantation (years), average (SD)		13.9 (11.4)
Follow up: prosthesis age (years), average (SD)		3.5 (1.7)
Medical History		
Hysterectomy (%)		6 (46%)
Total previous incontinence procedures (%)		
	0	1 (8%)*
	1	3 (23%)
	2	6 (46%)
	3	1 (8%)
	4	2 (15%)
Outcomes		
Questionnaires		
UDI-6 (score 0-100) average		2.2
IIQ-7 (score 0-100) average		3.2
Patient satisfaction (%)		
	Neutral	1 (8%)
	Moderately satisfied	0 (0%)
	Satisfied	2 (15%)
	Very satisfied	10 (77%)
Independent sphincter usage (%)		13 (100%)
Recommend to peer with comparable complaints (%)		13 (100%)
Pad usage		
Pads prior to implantation, average (SD)		6.6 (2.3) **
Pads post implantation, average (SD)		0.9 (1.6) **
Continent (0 pads after treatment) (%)		6 (62%)
0-1 pads daily after treatment (%)		10 (77%)

**Table 1: patient characteristics and outcome**  
\* One patient had primary neurogenic sphincter deficiency  
\*\* Difference pads prior/after treatment: P = <0,001

## RESULTS

In total, 15 AUS implantations in 13 women (mean age of 64.5 years (+/- SD 5.9)) were performed. Two patients underwent a cuff revision after previous AUS placement. In 2 patients (one after transvaginal tape procedure complicated by bladder neck erosion and one after resection of pelvic lymphoma) an omentoplasty was performed 4 to 6 months ahead of implantation. Nine patients (69%) had undergone 2 or more SUI procedures prior to AUS. Of all patients, 12 have reported to be (very) satisfied. The average daily pad usage decreased from pre-operative 6 to post-operative 0.9 (P<0.001). Eight patients (62%) had no pad usage post operatively. The average postoperative UDI-6 score was 2.2 and IIQ-7 score 3.2.

## CONCLUSION

The AUS in female patients with recurrent SUI shows beneficial results regarding functional outcome, patient satisfaction and quality of life. Therefore, AUS has to be considered as an option in women with recurrent SUI, even after failure of multiple surgical procedures.