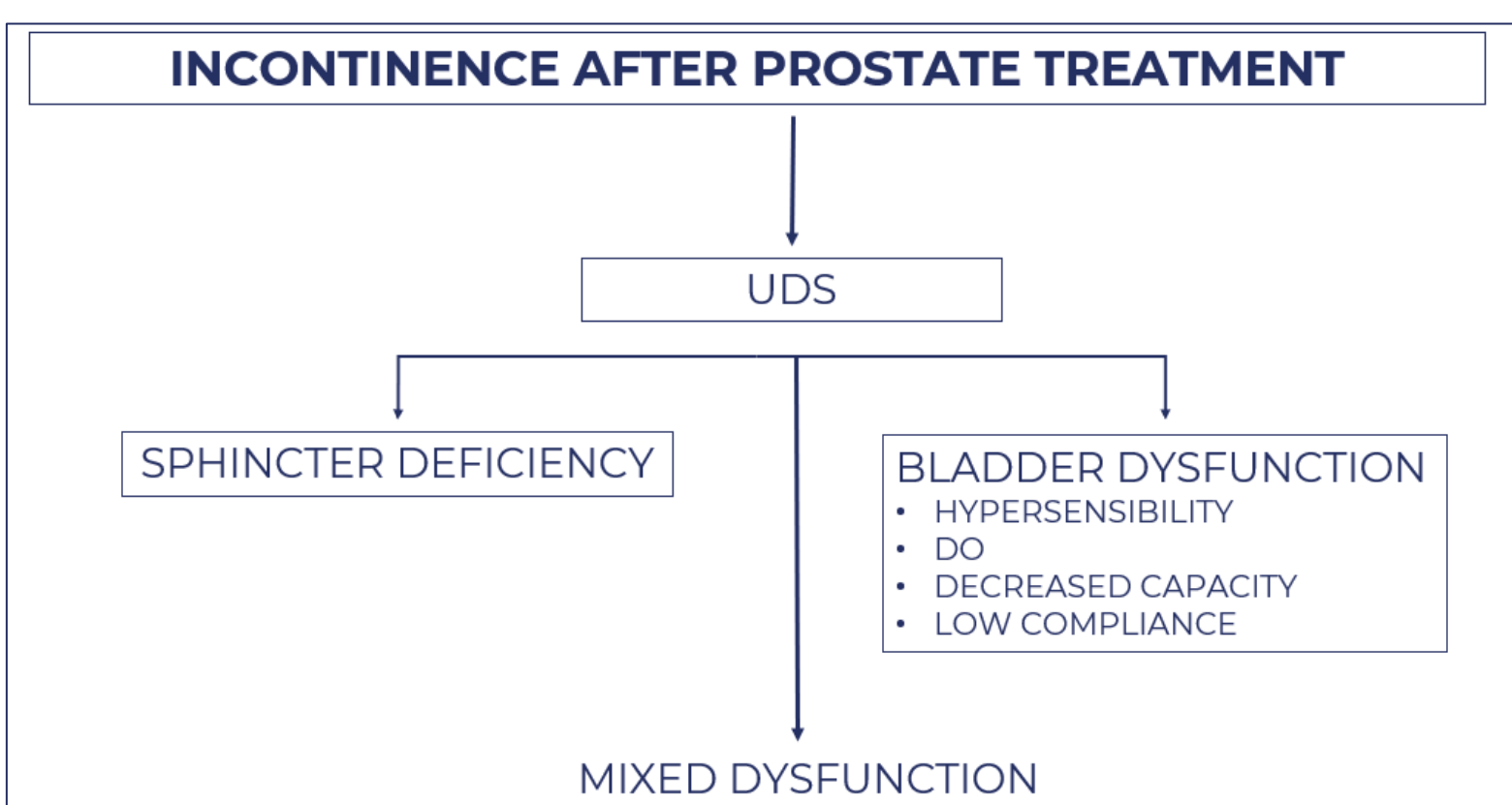


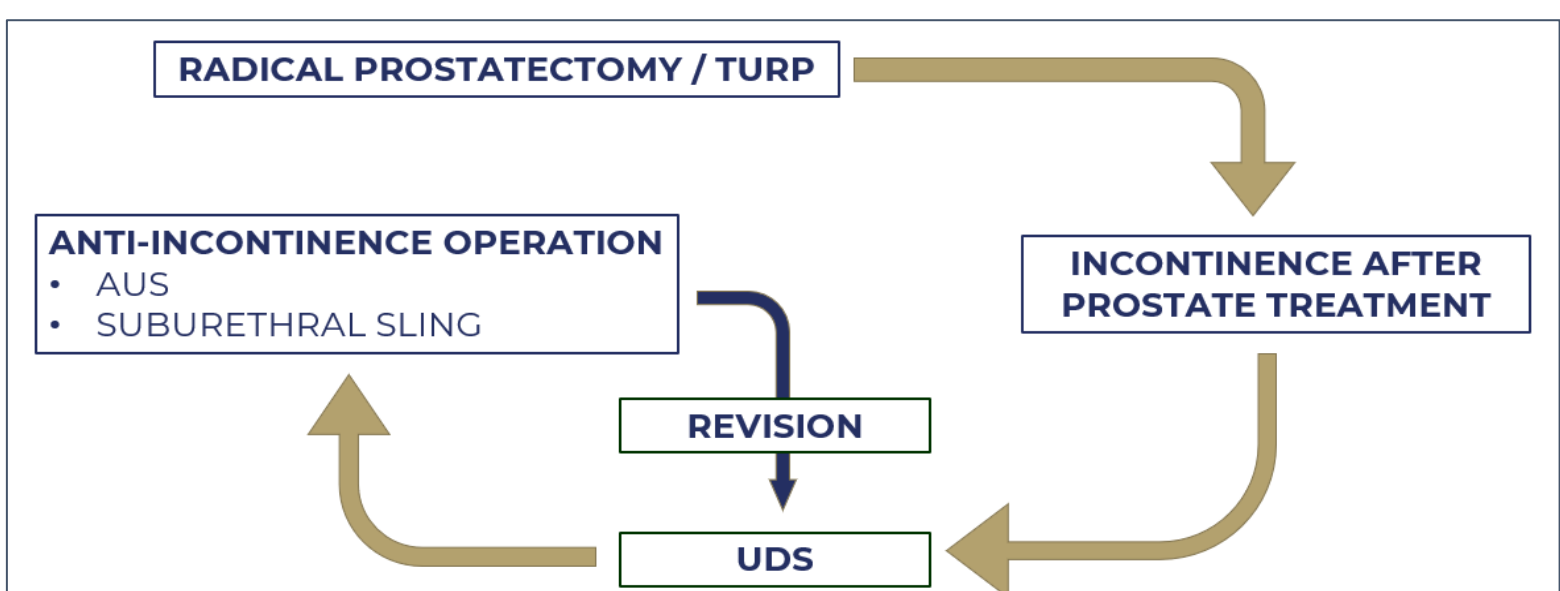
INTRODUCTION

The leading cause of male stress urinary incontinence (SUI) is the iatrogenic deficiency of the urethral sphincter.¹ However, numerous investigations reported about a wide spectrum of bladder dysfunction as the alternative etiopathology of leakage as well.² The aim of our study was to analyze the results of preoperative urodynamic studies (UDS) of men who underwent corrective surgery for SUI, assess the frequency of urodynamic abnormalities and pinpoint all the possible risk factors that can be considered predictive for the outcome of anti-incontinence operations.



METHODS

Between October 2010 and November of 2021, we performed surgery on 151 male patients (age: 69,7±5,8 (57-86)) with stress urinary incontinence at the Department of Urology of Semmelweis University. We analyzed the preoperative urodynamic parameters by 127 of them. 101 (79,5%) underwent artificial urinary sphincter (AMS800) implantation, 26 received suburethral sling (8 ARGUS, 17 ATOMS, 1 M-Sling). The follow up was at least twelve months in all the cases.



We divided the study population into two groups based on the level of postoperative continence (totally and partially continent patients*) and compared their preoperative urodynamic parameters: uroflow, post-void residual volume (PVR), bladder capacity, sensation, compliance, detrusor activity, bladder contractility, bladder outlet obstruction and maximal voiding detrusor pressure.

*: The definition "continent" was based on daily pad use: 0-1/24h meant the operated person was counted as continent

LITERATURE

- 1: Castellan P et al. Management of Urinary Incontinence Following Radical Prostatectomy: Challenges and Solutions. Ther Clin Risk Manag. 2023 Jan
- 2: Ficazzola MA, Nitti VW. The etiology of post-radical prostatectomy incontinence and correlation of symptoms with urodynamic findings. J Urol. 1998;160:1317-1320.
- 3: Romics M et al. Major Complications after Male Anti-Incontinence Procedures: Predisposing Factors, Management and Prevention. Urol J. 2020 Apr 20;18(1):92-96.

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RESULTS

The preoperative UDS confirmed the presence of SUI by every patient, and in 90 cases (70,9%) it also showed other urodynamic abnormality / abnormalities as well.

ARTEFICIAL SPHINCTERS AND SUBURETHRAL SLINGS

UDS PARAMETER	FULLY CONTINENT n= 61 (100%)	PARTIALLY CONTINENT n= 66 (100%)	p
MAXIMAL FLOW (ml/s)	14,2±15,2	13,4±7,4	0,76
RESIDUAL URINE (ml)	4,1±16,7	2,3±13,8	0,50
HYPERSENSIBILITY n (%)	7 (11,4)	18 (27,3)	0,043
BLADDER CAPACITY (ml)	266,5±49,2	268,6±74,6	0,87
DECREASED CAPACITY n (%)	29 (47,5)	30 (45,5)	0,86
DETRUSOR OVERACTIVITY n (%)	19 (31,1)	30 (45,4)	0,10
LOW COMPLIANCE n (%)	1 (1,6)	4 (6,1)	0,36
Pdet DURING MAX FLOW (H2Ocm)	32,8±24,3	39,5±32,2	0,20
HYPOCONTRACTILITY n (%)	12 (19,7)	9 (13,6)	0,47
BLADDER OUTLET OBSTRUCTION n (%)	6 (9,8)	13 (19,7)	0,14
SINGLE UDS ABNORMALITY	40 (65,1)	46 (69,7)	0,84
MULTIPLE UDS ABNORMALITIES	21 (34,4)	20 (30,3)	0,66

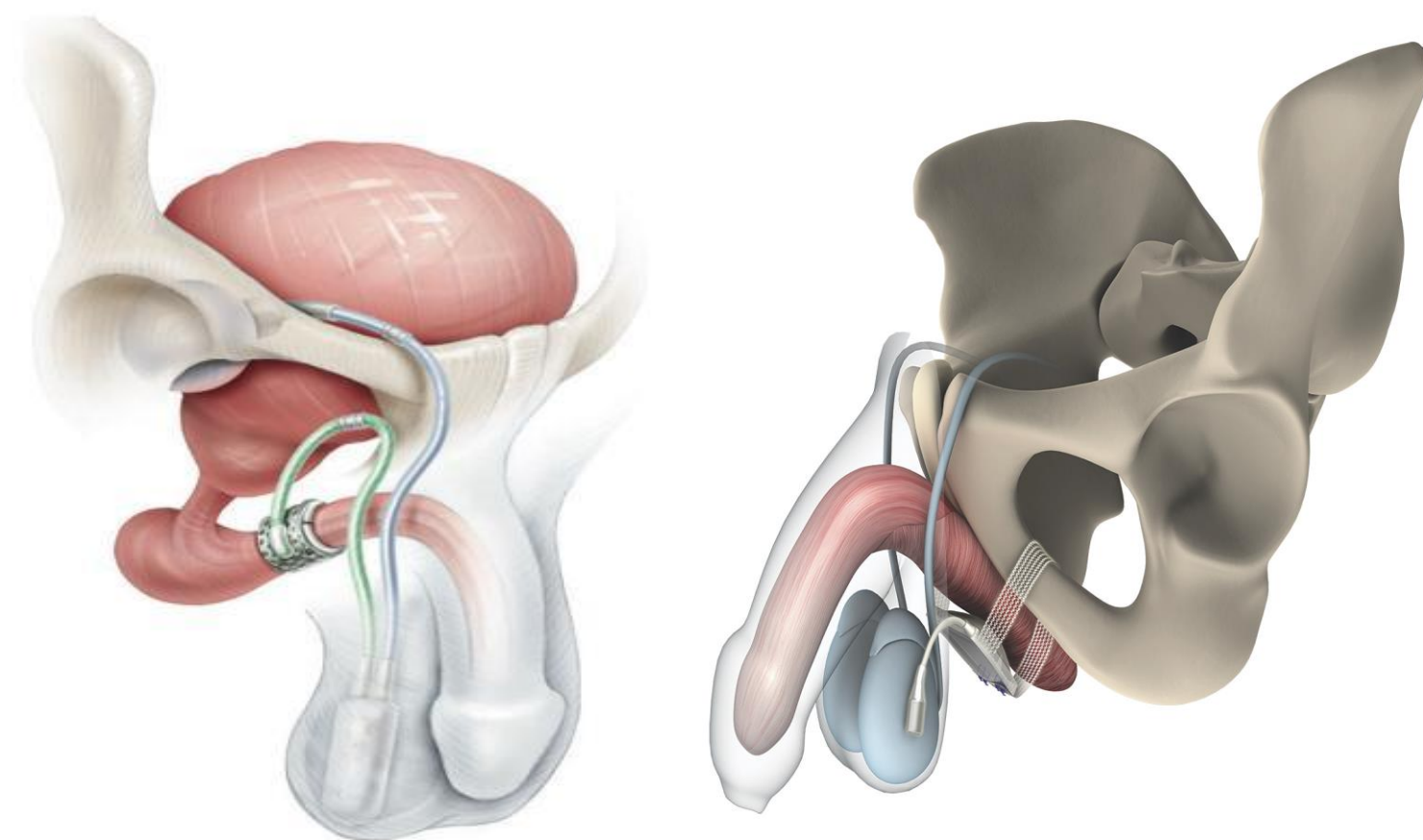
Comparing the totally continent group (n=61) with the partially continent group (n=66) there was very little difference to declare within the preoperative findings. (Single UDS abnormality: 40 vs 46 patients (p=0,84), multiple UDS aberrations: 21 vs 20 (p=0,88).) The most common UDS abnormalities beside the SUI: decreased bladder capacity (46,5%), detrusor overactivity (38,6%), increased sensation (19,7%) - only the latter differed significantly between the two groups (7/61 vs 18/66, p=0,043).

ARTEFICIAL SPHINCTERS

UDS PARAMETER	FULLY CONTINENT n=50 (100%)	PARTIALLY CONTINENT n=51 (100%)	p
MAXIMAL FLOW (ml/s)	12,1±5,7	13,2±7,6	0,49
RESIDUAL URINE (ml)	5±18,3	3±15,6	0,56
HYPERSENSIBILITY n (%)	6 (12)	15 (29,4)	0,049
BLADDER CAPACITY (ml)	263,8±72,4	269±76,1	0,85
DECREASED CAPACITY (%)	24 (48)	24 (47)	>0,999
DETRUSOR OVERACTIVITY n (%)	17 (34)	25 (49)	0,16
LOW COMPLIANCE n (%)	1(2)	2 (4)	>0,999
Pdet DURING MAX FLOW (H2Ocm)	30,3±21,3	36±31,4	0,29
HYPOCONTRACTILITY n (%)	11 (22)	6 (11,8)	0,19
BLADDER OUTLET OBSTRUCTION n (%)	4(8)	11 (21,5)	0,091
SINGLE UDS ABNORMALITY	37 (74)	38 (74,5)	0,82
MULTIPLE UDS ABNORMALITIES	13 (27)	13 (25,5)	0,39

CONCLUSION

The main reason behind male stress incontinence is the acquired deficiency of the urethral sphincter. Nevertheless, in most of the cases other urodynamic abnormalities could be demonstrated, just like decreased bladder capacity, detrusor overactivity and increased bladder sensation. In case these abnormalities manifest as clinical symptoms, intervention might be needed.³ However, the presence of these abnormalities did not influence the outcome of anti-incontinence operations and could not be used as predictive factors for the outcome of anti-incontinence operations in men.



AMS 800™ Artificial Urinary Sphincter (Boston Scientific) and the ATOMS - Adjustable Transobturator Sling (AMI GmbH)