

difference was found between groups in demographic and clinical data. We had a statistically significant anatomical correction in all vaginal segments in both groups. In particular in Group 1 we had a correction of anterior vaginal prolapse in 91.3% of patients, of central descensus in 93.5% and of posterior vaginal prolapse in 95.7%; in Group 2 we had a correction of anterior vaginal prolapse in 90.9% of patients, of central descensus in 93.2% and of posterior vaginal prolapse in 93.2%. No intra-operative complications occurred in both groups. Vaginal mesh extrusion was observed in 5 patients in group 1 (2 underwent surgical partial removal of the mesh). No complications were observed in group 2. Pre and post-operative symptoms of both groups are reported in Table 1. In group 1 we had de novo UUI in 3 patients and de novo constipation in 2 patients. In group 2 we had de novo UUI in 4 patients, de novo dry OAB in 3 patients and de novo constipation in 2 patients. Quality of life was significantly improved in all domains in both groups, according to the King's Health Questionnaire. We observed a statistically significant differences between the two groups in the VAS score (mean value 8.84 in group 1 vs 9.45 in group 2 – p = .0263) and in PGI-I score (mean value 1.56 in group 1 vs 1.20 in group 2 – p = 0046).

Table 1- Pre and post-operative symptoms in both groups

	Group 1 N° 46			Group 2 N° 44		
	Pre-op	Post-op	p*	Pre-op	Post-op	p*
IUS, n° (%)	18 (39.1)	14 (30.4)	.3865	16 (36.4)	21 (47.7)	.2636
UUI, n° (%)	13 (28.3)	7 (15.2)	.1489	13 (29.5)	6 (13.6)	.1815
Dry OAB	32 (69.6)	4 (8.7)	.0000	22 (50)	6 (13.6)	.0014
Voiding symptoms	39 (84.8)	2 (4.3)	.0000	34 (77.3)	3 (6.8)	.0000
Constipation	18 (39.1)	8 (17.4)	.0162	18 (40.9)	12 (27.3)	.0439

* McNemar Chi-square test

Table 2- Comparison of post-op results between the two groups

	Group 1 n. 46	Group 2 n. 44	p*
	Post-op	Post-op	
IUS, n° (%)	14 (30.4)	21 (47.7)	.1904
UUI, n° (%)	7 (15.2)	6 (13.6)	1.0000
Dry OAB, n° (%)	4 (8.7)	6 (13.6)	.7518
Voiding symptoms, n° (%)	2 (4.3)	3 (6.8)	1.0000
Constipation, n° (%)	8 (17.4)	12 (27.3)	.4533
Pont Ba >stage 2, n° (%)	4 (8.7)	4 (9.1)	.5465
Pont C>stage 2, n° (%)	3 (6.5)	3 (6.8)	.9123
Point Bp>stage 2, n° (%)	2 (4.3)	3 (6.8)	.2207

Discussion: This study demonstrates that both techniques are equivalent regarding anatomy, function and QoL. L-CSP associated with total hysterectomy has a higher incidence of post-operative complications than the association with a subtotal hysterectomy which, in our opinion, is a factor to consider when selecting the appropriate surgical procedure.

SC31 Influence of laparoscopic lateral suspension for pelvic organ prolapse on overactive bladder symptoms

E. Malanowska, E. Rubilotta, A. Starczewski, W. Bielewicz, M. Balzarro (Szczecin, Poland)

Aim of the study: To assess the anatomical results and the effect on OAB symptoms in women underwent laparoscopic lateral suspension (LLS) for pelvic organ prolapse (POP).

Materials and methods: This prospective study included women with apical POP underwent surgical repair with LLS from 01.2016 to 12.2017. The baseline and the 1-year f-up included: post-void residual (PVR) urine, urinalysis, vaginal examination, OAB symptoms, questionnaires (Pelvic Floor Distress Inventory 20 - PFDI20; Urinary Distress Inventory 6 - UDI 6; Colorectal-anal Distress Inventory 6 - CRADI6; Pelvic Organ Prolapse Distress Inventory 6 - POPDI6. Exclusion criteria were: PVR >150 ml, posterior vaginal wall defects, previous prolapse or incontinence surgery or hysterectomy, neurological conditions, diabetes,

bladder pain syndrome. To correlate the different stages of POP and OAB, we divided the population in 3 groups: Group 1 anterior vaginal wall and Cervix defect both Stage II; Group 2 anterior vaginal wall defect Stage III and Cervix defect Stage II; Group 3 anterior vaginal wall and Cervix defect both Stage III. Statistical evaluation was done by Pearson's correlation and Student t-test (p value < 0.001).

Results: 64 women underwent LLS for uterine prolapse, 78.1% had concomitant anterior vaginal wall defect. Mean age was 59.4 y.o. At 1-year f-up anatomic success rates was 84.4% for apical and 76.2% for anterior compartment (table 1). Total recurrences rate was 12.5%: anterior vaginal wall 3.1%; apical 4.7%; enterocele 1.6%; posterior vaginal wall 3.1%. Need for reoperation was 10.9%. No patient had vaginal mesh exposure. Comparison between OAB symptoms before and after LLS showed a significant resolution of OAB in 76% of the women, while 2.6% had de-novo. Both stress and urgency urinary incontinence positively changed (p < 0.001). Female sexual functions didn't change. Table 2 reports symptoms before surgery and at the 1-year f-up. In all the 3 groups we documented a trend in ameliorating of OAB after surgery, regardless of the POP-Q stage. However, significant correlation was achieved only in Group 2. Group 1 was composed by 11 women: preoperative OAB in 2 and postoperative OAB in 1 (p < 0.34). Group 2 was composed by 31 women: preoperative OAB in 13 and postoperative OAB in 2 (p < 0.0003). Group 3 was composed by 22 women: preoperative OAB in 10 and postoperative OAB in 4 (p < 0.03). Patient satisfied after POP repair were 95.3%.

Figure 1: Symptoms and objective assessment before surgery and at 12 months follow-up

Objective assessment: preoperative and the follow-up (*T test)				
POP-Q parameters	Preoperative Mean (SD)	Follow-up at 12 months Mean (SD)		P*
Aa	0.80 (±0.95)	-1.69 (±0.89)		<0.001
Ba	1.67 (±1.13)	-1.63 (±1.11)		<0.001
C	-0.06(1.63)	-5.55(±2.53)		<0.001
GH	4.00 (±0.59)	2.77 (±0.75)		<0.001
PG	2.33 (±0.94)	2.66 (±0.62)		<0.006
TVL	10 (±0)	-		-
Ap	-0.44 (±1.08)	-1.54(±1.04)		<0.001
Bp	-0.47 (±1.01)	-2.19 (±2.29)		<0.001

Symptoms before surgery, and at the 12 months follow-up					
	Preoperative n (%)	Follow-up n (%)	Valuable positive change, n (%)	Valuable negative change, n (%)	P
Bulging	62/64 (96.9)	10/64 (15.6)	52/62 (83.9)	0/2 (0.0)	<0.001
UUI	26/64 (40.6)	10/64 (15.6)	18/26 (69.2)	2/38 (5.3)	<0.001
SUI	14/64 (21.9)	7/64 (10.9)	9/14 (64.3)	2/50 (4.0)	<0.042
Urinary frequency >8/day	39/64 (60.9)	13/64 (20.3)	27/39 (69.2)	1/25 (4.0)	<0.001
Nycturia (≥ 1)	28/64 (43.7)	1/64 (1.6)	27/28 (96.4)	-	<0.001
Overactive Bladder	25/64 (39.1)	7/64 (10.9)	19/25 (76.0)	1/39 (2.6)	<0.001
Constipation	39/64 (60.9)	22/64 (34.4)	18/39 (46.1)	1/25 (4.0)	<0.001
Sexual activity	37/64 (57.8)	38/64 (59.4)	3/27 (11.1)	2/37 (5.4)	<0.658

Discussion: LLS was an effective procedure for apical and anterior vaginal wall defects with a high objective and subjective success rate. A great cure rate of OAB symptoms was evidenced specially in women with anterior vaginal wall defect stage III and Cervix stage II POP. The low sample size and the lower POP stage of patients in Group 1 may have affected the results in other groups. Higher POP stage could not gain advantages from the surgery due to its severity and prolonged condition. Anyway, women may benefit from a resolution of OAB and POP symptoms with the improvement of patient's quality of life.

SC32 Urodynamic findings and functional outcomes after laparoscopic sacrocolpopexy and Trocarless Transvaginal Mesh System for symptomatic pelvic organ prolapse: Two surgical techniques compared

E. Illiano, F. Natale, A. Marchesi, R. Filipponi, A. Giannantoni, M. Gubbiotti, E. Costantini (Terri)

Aim of the study: In literature few studies have objectified the functional outcomes of pelvic organ prolapse (POP) surgery by urodynamic parameters, comparing the vaginal and laparoscopic

approaches. The aim of this study was to compare the functional outcomes and urodynamic findings after laparoscopic sacrocolpopexy (LSC) and trocarless transvaginal mesh system (TTMs) in patients with advanced apical pelvic organ prolapse (POP).

Materials and methods: This is a single-centre prospective study. We included women with symptomatic and POP stage II-IV, who underwent LSC and TTMs. All surgical procedures were performed by two senior surgeons. The preoperative evaluation included: history, clinical examination, urodynamic testing, translabial ultrasound. Women were followed up at 1,3,6,12 months after surgery and annually by history, examination, and urodynamic test at 6 months after surgery. Bladder Outlet Obstruction (BOO) was defined according to Blaivas-Groutz nomogram [Maximum flow (Q_{max}) ≤ 12 mL/s and detrusor pressure at Q_{max} (P_{detQ_{max}}) ≥ 20 cm H₂O in the pressure-flow study. Detrusor underactivity (DU) was defined according to Projected Isovolometric Pressure (PIP) index, that it was calculated as Q_{max} + P_{detQ_{max}} (normal range 30–75 cmH₂O). Detrusor overactivity (DO) was defined according to current recommendations as involuntary detrusor contractions during filling cystometry, of variable duration and amplitude. To evaluate the urinary symptoms we used Urogenital distress inventory short form (UDI-6) questionnaires before and 6 months after surgery. Statistical analysis: the categorical data are presented in the form of absolute numbers and their corresponding percentage values. The Statistical analysis: McNemar test, χ^2 tests, the Wilcoxon signed ranks test, $p < 0.05$.

except for the Q_{max} and the maximum cystometric capacity (Table 1). Detrusor overactivity and BOO disappeared in 82% and in 92% of patients after LSC, and in 82.1% and 89.5% of patients in TTMs respectively without difference between the 2 groups. The DU persisted in 22% and of 50% women in LSC and TTMs group respectively. The success rate of stress urinary incontinence after LSC was higher than TTMs (72.3% vs 43% $p = 0.005$). The most common pre-operative symptoms were voiding symptoms in both groups, they resolved in 93.6% and 86.3% of patients in LSC and TTMs respectively. The OAB disappeared in 72% and 87% of women in LSC and TTMs. The UDI-6 showed an improvement without differences between two groups ($p = 0.08$). Apical prolapse was corrected to stage 0-I in 100% of cases by LSC, and in 92.4% by TTMs.

Discussion: The urodynamic finding showed that both the LSC and TTMs in women with advanced apical POP provide good functional outcomes, with higher success rate of SUI in LSC approach.

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Efficacy and safety of UpHold Vaginal Support System in transvaginal surgery of pelvic prolapse, with personal technique modification

V. Fioravanti, A. Piccirilli, A. Cassani, M. Signoretti, F. Romantini, M. Ferritto, G. Paradiso, C. Vicentini (*L'Aquila*)

Aim of the study: The aim of the study is to evaluate the efficacy and safety of the UpHold® LITE Vaginal Support System with Capio SLIM® for the correction of stage 3 or 4, symptomatic, anterior vaginal prolapse with or without apical descent.

Materials and methods: In this retrospective and monocentric study, conducted from November 2015 to April 2018, we enrolled 31 patients. All women experienced surgery with positioning of the UpHold® LITE Vaginal Support System with Capio SLIM® for a symptomatic anterior vaginal prolapse with or without apical descent, stage 3 or 4, according to the POP-Q staging system. 9/31 patients (29%), in order to better support the uterus, underwent surgery with modified approach. The surgical approach was modified moving the two propylene arms anteriorly around the cervix, itself crossing one another and carrying the right arm to the left side and vice versa, with the purpose of re-create the “cervical ring”. Primary endpoint was the anatomical correction of the prolapse, success was defined as POP-Q ≤ 2. Secondary end-point was to evaluate patients quality of life by analysing their subjective symptoms with questionnaire administered before the surgery, after six month and one year. Vaginal and sexual symptoms were evaluated with the International Consultation on Incontinence questionnaire on vaginal symptoms (ICIQ-VS), QoL was assessed with the Prolapse Quality of Life questionnaire (P-QoL) and to define subjective outcomes all patients completed the Patient Global Impression of Improvement score (PGI-I). The average follow up was one year.

Results: Mean patients age was 68 years. 13 (42%) women had previous hysterectomy and 5 (16%) had previous surgery for anterior prolapse. 4 (13%) patients experienced a concomitant hysterectomy for a large uterine volume. No intraoperative complications occurred, 3 (10%) patients experienced acute retention of urine after surgery spontaneous resolved during first week. We achieved excellent anatomical results at one year: no mesh extrusion, stage 1 or 2 asymptomatic prolapse in 6 patients (19%) that required no further repair, 8 patients (26%) experienced de novo stress urinary incontinence (SUI) resolved positioning of a midurethral sling. Statistically significant improvements were observed in the ICSQ-VS and P-QoL questionnaires during follow-up. The PGI-I score shows that 22 patients (71%) considered themselves cured or improved, 7 (22%) unchanged and 2 (7%) experienced worsening of symptoms.

Table 1 The preoperative and postoperative urodynamic findings and clinical data

	Preop VLP	Preop TTMs	P value	Postop VLP	Postop TTMs	P value
Age (years, mean±SD)	62.5±7.5	61.4±7.3	>0.05			
Body mass index (kg/m ² , mean±SD)	26.1±3.2	26.3±3	>0.05			
Parity (median, range)	2 (1-5)	2 (1-5)	>0.05			
Menopause n (%)	41 (87.2)	42 (95.5)	0.166			
Uroflowmetry						
Q max (mean±SD; ml/sec)	12.3±3.7	12.8±2.5	0.369	23.9±3.4	22.4±2.7	0.013
Post voiding residual (>30% of volume) n(%)	34 (72.3)	30 (68.2)	0.664	9 (19.1)	7 (15.9)	0.68
Cystometry						
Low bladder compliance n (%)	31 (66)	18 (19.4)	0.017	8 (17)	8 (18.2)	0.88
Maximum cystometric capacity (mean±SD, ml)	330.46±79	355.18±58.2	<0.0001	378.8±37.4	359±43.3	0.03
Detrusor overactivity n(%) Wet	33 (70.2) 20 (42)	28 (63.6) 20 (45.4)	0.505	6 (12.8) 0	5 (11.4) 3 (6.8)	0.83
Detrusor pressure IDC (mean±SD, cmH ₂ O)	26.0±21.3	25.7±20.9	0.79	11.8±1.4	11.3±2.5	0.88
Valsalva Leak Point Pressure Positive	21 (44.7)	16 (36.4)	0.42	3 (6.4)	8 (18.2)	0.084
Pressure-Flow Study						
Qmax (mean±SD; ml/sec)	12.6 ±6.2	12.7 ±1.7	0.332	24.6±3	23.27±1.5	0.016
Post voiding residual (>30% of volume) n(%)	37 (78.7)	34 (77.3)	0.86	7 (14.9)	5 (11.4)	0.619
Pdet max (mean±SD, cmH ₂ O)	33.01±11	29.1±11.16	0.08	15.18±3.2	15.22±2.7	0.756
Pdet Qmax (mean±SD, cmH ₂ O)	32.3±13	29.57±12.05	0.31	15.2±2.3	13.6±2.7	0.146
PIP <35 cmH ₂ O	9 (19.1)	12 (27.3)	0.358	2 (4.3)	6 (13.6)	0.114
BOO in according to Blaivas and Groutz nomogram	41 (87.2)	38 (86.4)	0.9	3 (6.5)	4 (9.1)	0.6
Overactive bladder n(%)	22 (46.8)	16 (36.4)	0.313	6 (12.8)	2 (4.5)	0.16
Stress urinary incontinence n(%) De novo n(%)	25 (53.2)	18 (40.9)	0.241	13 (27.7) 6 (12.7)	25 (56.8) 10 (18.2)	0.005
Urgency urinary incontinence n(%)	22 (46.8)	27 (61.3)	1.164	0	4 (9)	0.003
Voiding symptoms n(%)	47 (100)	44 (100)	-	3 (6.3)	6 (13.6)	0.247
Storage symptoms n(%)	28 (59.6)	21 (47.4)	0.257	11 (23.4)	12 (27.3)	0.671

Results: In this study were included 91 women (47 in LSC group and 44 in TTMs group). The median follow-up was 21 months (range 8–46 months). After surgery all urodynamic parameters improved in both groups without significant difference between the 2 approaches,