

Introduction

- Pelvic organ prolapse (POP) and overactive bladder (OAB) symptoms are frequently encountered in the same patient
- Pelvic organ prolapse repair usually resolves the mechanical BOO but the effect on OAB symptoms may be unpredictable.
- Laparoscopic lateral suspension (LLS) described by Dubuisson represents a novel minimally invasive technique in the treatment of POP, especially apical defect and concomitant cystocele
- There are only few data available on the influence of laparoscopic lateral suspension on functional outcomes
- There is still lack of data which describe the influence of laparoscopic lateral suspension on OAB.

Aim

The aim of this study was to assess the anatomical results and the effect on OAB symptoms in a cohort of women who underwent laparoscopic lateral suspension for POP

Methods and Materials

This prospective study included all women with apical POP underwent surgical repair with LLS from January 2016 to December 2017.

The baseline and the 1-year follow-up included: post-void residual measurement, urinalysis, vaginal examination, OAB symptoms and evaluation and administration of questionnaires (Pelvic Floor Distress Inventory 20 - PFDI20; Urinary Distress Inventory 6 - UDI 6). Other questionnaires used were: the Colorectal-anal Distress Inventory 6 (CRADI6) and the Pelvic Organ Prolapse Distress Inventory 6 (POPDI6).

Exclusion criteria were: post void residual volume >150ml, posterior vaginal wall defects, previous prolapse or incontinence surgery, previous hysterectomy, neurological conditions, uncontrolled diabetes, bladder pain syndrome.

Three groups of patients were divided to: (i) Group 1 women with anterior vaginal wall and Cervix defect both Stage II; (ii) Group 2 women with anterior vaginal wall defect Stage III and Cervix defect Stage II; (iii) Group 3 women with anterior vaginal wall and Cervix defect both Stage III. Statistical evaluation was done by Pearson's correlation and Student t-test (p value less than 0.001 was considered statistically significant)

Results

Table 1: 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
PB	2.33 (±0.84)	2.66 (±0.62)	<0.006
TVL	10 (±0)	10 (±0)	-
Ap	-0.44 (±1.08)	-1.54(±1,04)	<0,001
Bp	-0.47 (±1,01)	-2.19 (±2,29)	<0,001

Table 2: 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
Nocturia (≥ 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

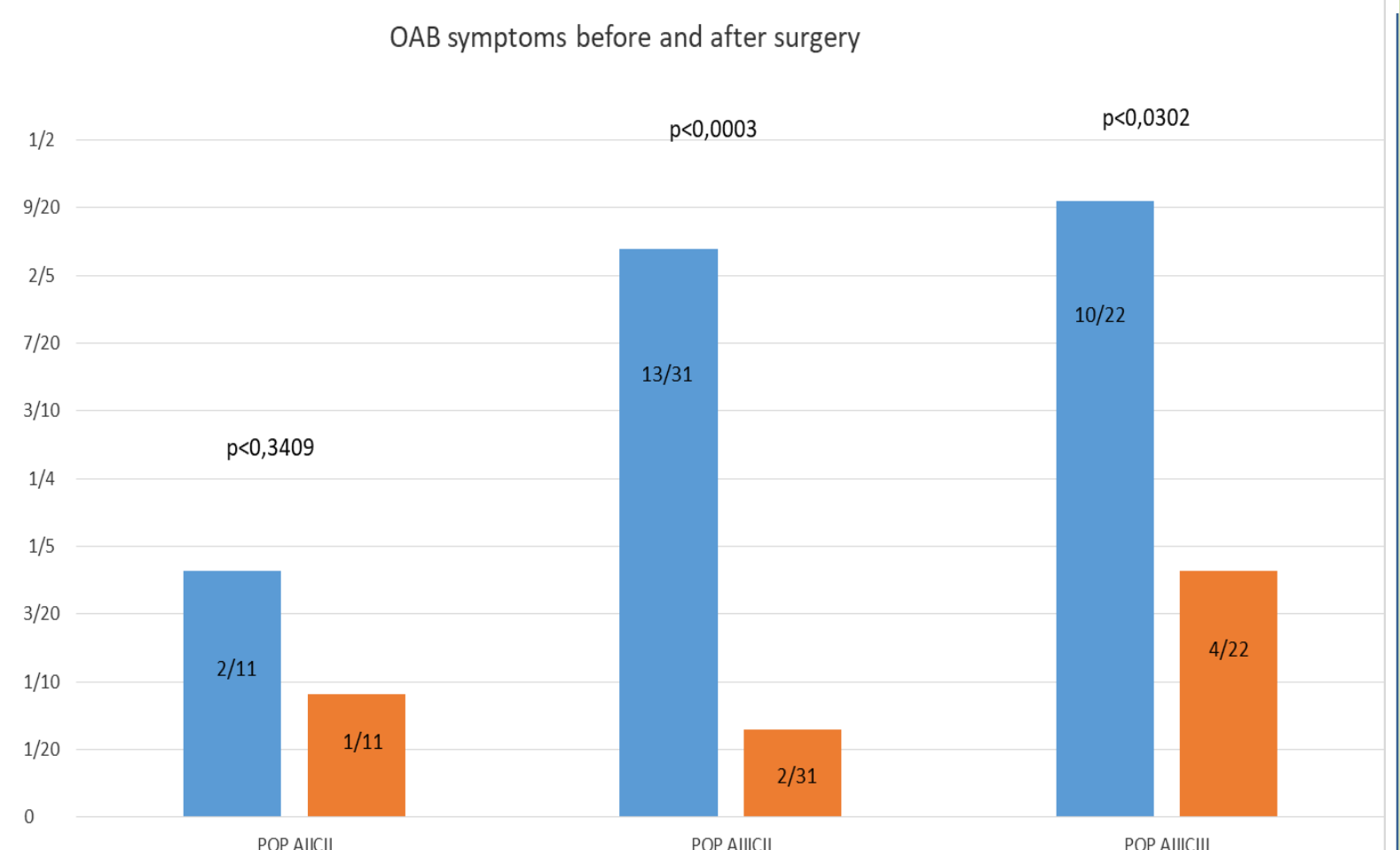
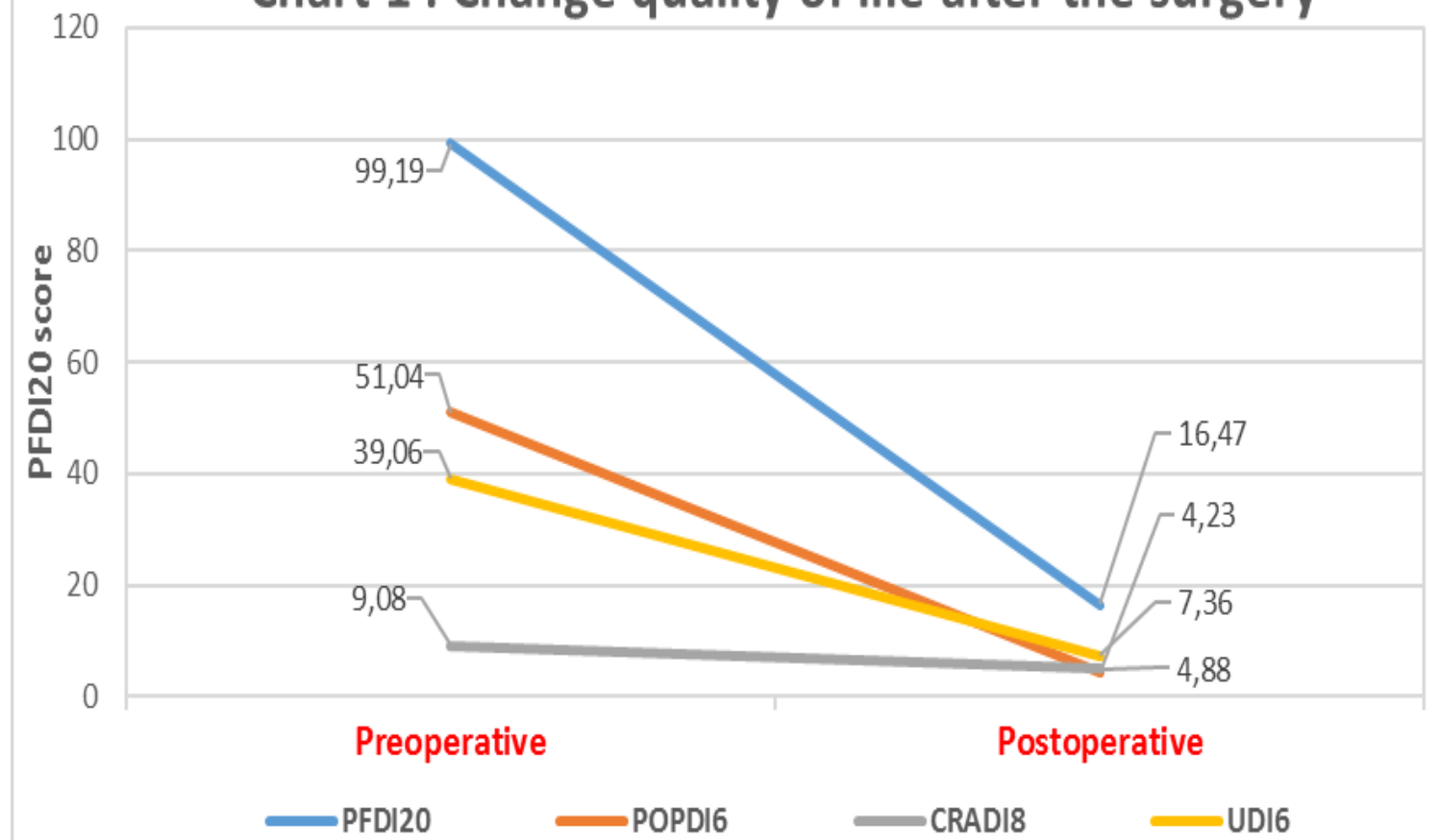


Figure 1. Subdivision of the cohort in three groups according to POP stage and correlation between stages and overactive bladder symptoms. AVW, anterior vaginal wall; C, cervix; II, II^ostage POP-Q; III, III^ostage POP-Q.

Chart 1 : Change quality of life after the surgery



Interpretation of results

1. Our data showed that LLS was a feasible, safe and effective procedure for apical and anterior vaginal wall defects with a high objective and subjective success rate at 1-year follow-up
2. A great cure rate of OAB symptoms was evidenced specially in women with anterior vaginal wall defect stage III and Cervix stage II POP (Group 2)
3. The lower POP stage of patients in Group 1 had only a limited influence on the OAB. Conversely, women in Group 3 with a higher POP stage could not gain advantages from the surgery due to its severity and prolonged condition.
4. Women may benefit from a resolution of OAB and POP symptoms with the improvement of patient's quality of life

Concluding message

1. Our study widely analyzed several functional results comparing them to the anatomical findings.
2. The surgical treatment of apical descensus and cystocele by laparoscopic lateral suspension resulted in the significant improvement in prolapse, OAB symptoms, and patients' quality of life.

References

1. Liedl B, Goeschen K, Sutherland SE, et al. Can surgical reconstruction of vaginal and ligamentous laxity cure overactive bladder symptoms in women with pelvic organ prolapse? BJU Int. 2018 Jun 16
2. Balzarro M, Rubilotta E, Porcaro AB, et al. Long-term follow-up of anterior vaginal repair: a comparison among colporaphy with reinforcement by xenograft, and mesh Neurourol Urodyn 2018 37(1):278-28