

## ANTERIOR PROLIFT LIKE (PL) SURGERY: CAN PROVOKE PELVIC ORGAN PROLAPSE (POP) IN UNAFFECTED POSTERIOR COMPARTMENT?

### Aims of study

The recurrence rate of POP surgeries is higher than what the surgeons expected. In an attempt to reduce this rate different mesh surgeries have been used, particularly the anchor mesh surgeries as Prolift. We developed a Prolift Like technique with the Prolift device parts but the mesh is made with Gynemesh PS following the figure of the original Prolift (anterior, posterior or total). In the follow-up of patients that undergo anterior PL surgery without rectocele in the preoperative evaluation, we start having the impression that these treatments can provoke rectocele in the short to medium term. This situation has been reported in the literature.

The aim of this abstract is to report the possible effect of anterior PL surgery in the unaffected posterior compartment. We report epidemiological features, type of surgery, surgical results, intraoperative - perioperative complications, postoperative and type of recurrence.

### Study design, materials and methods

This is a retrospective cohort of patients who underwent anterior PL surgery, without preoperative rectocele between January 2008 to December 2009.

Data of patients were obtained from the hospital database by a search for the surgery field cross with preoperative POPQ quantification. Case notes were reviewed to obtain information like demographics, symptoms, gynaecological exam (including POPQ quantification), follow-up at 3 weeks, 6 weeks, 3 months, 6 months, 1 year and then yearly. Recurrence was defined as stage II or higher in POPQ. Methods, definitions and units conform to the standards jointly recommended by the International Continence Society and the International Urogynecological Association, except where specifically noted.

All the surgeries were performed by urogynecology unit surgeons. Informed written consent was obtained from the clinical patients to perform the surgery.

To compare preoperative and postoperative POPQ we used *t* test.

### Results

Between January 2008 to December 2009 746 new patients were evaluated in the ambulatory urogynecology unit and in the same period 309 surgeries were performed. Eighty-eight of them underwent PL surgery. Of these patients, thirty-four were anterior PL without rectocele in the preoperative evaluation.

Demographic details including comorbidities and previous gynaecological surgeries are shown in Table 1.

Table 1 Demographic data

Demographic Data	
Mean age±SD, range/mode (years)	60,9±6,6, 42-71/59
Median total parity±SD, range/mode	3,3±1,6, 1-9/4
Median Vaginal spontaneous birth±SD, range/mode	2,9±1,6, 1-8/3
Median heaviest newborn weight±SD, range/mode (grams)	3727±610, 2800-5800/3500
Post Menopause status	28/34
Mean BMI±SD, range (kg/m <sup>2</sup> )	28,3±4,5, 22,4-38,7
<b>Previous gynecological surgeries</b>	35/88
Total any POP surgeries	10
Prolapse VH/HT with or without anterior or posterior colporrhaphy	7
Other POP surgeries	3
Non POP Abdominal hysterectomy	5
Other procedure	3

VH: Vaginal Hysterectomy HT: Abdominal Hysterectomy

The symptoms before surgery are shown in Table 2

Symptom	Percentage (n)
Bulge/vaginal pressure	100 (34)
Voiding difficulty	58,8 (20)
Urgency/urge incontinence	64,7 (22)
Stress Urinary Incontinence (SUI)	50 (17)
Colorrectal symptoms	8,8 (3)

In all patients, preoperative, the most affected was the anterior compartment. Four patients were staged II and thirty in stage III in POPQ classification.

The average Pre and post operative POPQ are shown in table 3:

	Preop	Postop	p Value
Aa±SD	1,3±1,3	-2,3±1	< 0,0005
Ba±SD	2,8±1	-2,4±1	< 0,0005
C±SD	-3±1,8	-5,3±1,8	< 0,0005
TVL±SD	8,1±1,4	8±1,2	0,8
Ap±SD	-2,4±0,5	-1,5±1,3	0,001

Bp±SD	-2,4±0,5	-1,4±1,4	<b>0,0007</b>
D±SD	-5,8±1,3	-6,8±1,3	<b>0,01</b>

SD: Standard deviation. In bold statistically significant p values

#### Surgical details:

Perioperative data are shown in table 4.

Perioperative Data	Ant PL
Mean operating time±SD (min)	52±15,1
Mean Estimated blood loss±SD (ml)	71,5±34
Intraoperative complications	3 <sup>1</sup>
Severe complication	0
Median hospital stay±SD (days)	3±1
Concomitant Surgeries	3 <sup>2</sup>

<sup>1</sup> One Hypertensive emergency due to IV epinephrine infiltration w/out consequences, one hematuria w/out bladder perforation, one bladder perforation managed with 1 week Foley      <sup>2</sup> Three TOT

#### Follow-up:

Follow-up details are shown in table 5

Follow-up Details	Ant PL (%)
Mean follow-up±SD (month)	8±4
General Recurrence	16 (47)
Anterior	2 <sup>3</sup> (5,8)
Posterior	13 <sup>4</sup> (38,2)
Apical	1 <sup>5</sup> (2,9)

<sup>3</sup> Two asymptomatic stage II cystocele      <sup>4</sup> Eight symptomatic and five asymptomatic rectocele      <sup>5</sup> One asymptomatic hypertrophic cervix elongation not diagnosed in preoperative

Of patients who had recurrent, twelve patients were staged IIp, two IIa, one IIc and one IIIp in POPQ classification.

#### Interpretation of results

Despite the excellent anatomical results in the affected compartment, with a cure rate of 94.2%, anterior PL is associated with high recurrence rates in the posterior compartment (38,2%). This rate seems too high, even higher than reported in the literature that reaches 23%. This may be explained by the type of our patients, most of them with stage III POP.

#### Concluding message

Apparently the use of these meshes would radically modify the functioning of the pelvic floor. We could postulate, that the force exerted by the cystocele on posterior compartment, could not allow the appearance of rectocele, when the anterior defect is repaired, we can see the hidden defects of the posterior compartment. It is important to continue the studies with larger sample size and better methodology as randomized studies. Posterior colporrhaphy may consider prophylactic in patients undergoing this anterior PL surgeries.

#### References

- Mariëlla I. J. Withagen et al. Does trocar-guided tension-free vaginal mesh (Prolift™) repair provoke prolapse of the unaffected compartments?. Int Urogynecol J Pelvic Floor Dysfunct 21 (3):271-278

Specify source of funding or grant	NONE
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	It is a retrospective cohort
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes