

OBJECTIVE FAILURE AFTER SITE-SPECIFIC ANTERIOR VAGINAL WALL REPAIR.Hypothesis / aims of study

Traditionally, anterior vaginal wall prolapse is believed to be derived from stretching and thinning of the vaginal wall. Pelvic organ prolapse surgery was thus performed by plication of the vaginal wall. However, gynaecologists have now split into two camps: those who still adhere to the traditional philosophy of plicating mid-vaginal bulges and those who now carry out site-specific repair. The believers of site-specific repair believe that pelvic organ prolapse is the result of specific defects of the attachment of the anterior vaginal fascia (lateral and central). [1] By performing site-specific pelvic organ prolapse surgery those specific defects are addressed and less failure of surgery is expected. In this study, we tried to assess the failure of pelvic organ prolapse in patients undergoing site-specific anterior vaginal wall repair.

Study design, materials and methods

This prospective cohort contains all patients undergoing site-specific anterior vaginal wall repair between April 2015 and September 2016. When performing site-specific anterior vaginal wall repair, a horizontal incision one centimetre above the cervix or vaginal vault in the anterior vaginal mucosa was made. The causative apical and lateral fascial defects were identified and if present attached to their place of origin with interrupted sutures. [2] If pre-operative physical examination showed apical prolapse as well, the uterus or vaginal vault was suspended at the discretion of the surgeon. In the presence of posterior wall pelvic organ prolapse we performed a site-specific posterior wall repair.

To assess the objective degree of pelvic organ prolapse, every patient was thoroughly examined using the POP-Q system before surgery and at follow-up at six weeks and 12 months after surgery or earlier on if patient had urogenital prolapse symptoms.

Primary outcome was objective failure in any compartment (Ba, C, Bp \geq 0), secondary outcome measures are objective failure of the anterior vaginal wall (Ba \geq 0), treatment for failure and complications during or after surgery.

Results

A total of 91 patients underwent anterior compartment site-specific prolapse surgery. Patient characteristics are depicted in table 1.

Table 1: Patient Characteristics

Age (n=91)		63.3 (52.3-69.2)
Body mass Index (n=80)		25.3 (23.4-27.4)
Smoking (n=82)	Yes	7 (8.5%)
	No	44 (53.7%)
	Quit	31 (37.8%)
Previous hysterectomy (n=91)	No	66 (72.5%)
	Yes	25 (27.5%)
Concomitant prolapse surgery (n=91)*	No	53 (58.2%)
	Apical	17 (18.7%)
	Posterior	30 (33.0%)
Previous prolapse surgery (n=91)	No	69 (75.8%)
	Yes	22 (24.2%)

* Total percentage > 100 because nine patients had anterior, posterior and apical prolapse surgery.

During surgery, four patients (4.4%) received additional surgery for stress urinary incontinence. Six patients had additional perineal repair surgery (6.6%). Two complications occurred during or after surgery. One iatrogenic bladder injury occurred. One patient needed additional surgery because of a vaginal adhesion causing pain. No other long-term complications occurred. Blood loss was limited, three patients had blood loss above 100 ml.

Six weeks after surgery, 11.2% had objective failure, half of which occurred in the anterior compartment (see table 3). Follow-up at 12 months was realized in 50 people because 35 women were operated less than one year ago and six patients were lost to follow-up. Of those 50 patients more than half had objective failure, 38% of patients had failure in the anterior compartment, 32% of patients had failure in another compartment (11 apical prolapse, five posterior vaginal wall prolapse). No significant differences were observed between patients with previous pelvic organ prolapse surgery or previous hysterectomy. Median time until failure was 4 months (IQR 1-8 months). Eight patients (16.0%) had surgery because of failure. Three patients had mesh surgery, four patients had apical prolapse surgery and one patient decided to visit another clinic for treatment. 11 patients (22.0%) decided to waive further treatment and six patients (12.0%) had conservative prolapse treatment (pelvic floor training or pessary treatment).

Table 2: Objective failure (Ba, C, Bp ≥ 0)

	All	Previous POP surgery*		Previous hysterectomy*	
		No	Yes	No	Yes
Follow-up 6 weeks	N=89 (%)	N=68 (%)	N=21 (%)	N=64 (%)	N=25 (%)
- Any site †	10 (11.2)	8 (11.8)	2 (9.5)	9 (14.1)	1 (4.0)
- Anterior comp	5 (5.6)	3 (4.4)	2 (9.5)	5 (7.8)	0 (0.0)
- Other comp	5 (5.6)	5 (7.4)	0 (0.0)	4 (6.3)	1 (4.0)
Follow-up 12 months**	N=50 (%)	N=36 (%)	N=14 (%)	N=37 (%)	N=13 (%)
- Any site †	29 (58.0)	21 (58.3)	8 (57.1)	20 (54.1)	9 (69.2)
- Anterior comp	19 (38.0)	12 (33.3)	7 (50.0)	12 (32.4)	7 (53.8)
- Other comp	16 (32.0)	12 (33.3)	4 (28.6)	11 (29.7)	5 (38.5)
Additional surgery	8/50 (16.0)	5/36 (13.9)	3/14 (21.4)	6/37 (16.2)	2/13 (15.4)

POP = Pelvic Organ Prolapse; comp = compartment

† Any site = number of patients with objective failure in any compartment

* No significant differences in failure were found between both groups (X^2 or Fisher's exact test)

** Or earlier if patients returned before follow-up at 12 months

Interpretation of results

At follow-up after 12 months, one third of patients had objective failure of the anterior vaginal wall. Previous studies reported failure rates of 11-70% in the anterior compartment following anterior colporrhaphy. [2] At our follow-up, one-third of patients had objective failure in another compartment, in literature the failure rate is about ten percent. [2] No data are available on failure in any compartment. In literature, only a small number of patients required additional prolapse surgery (3%), compared to 8% in our study. This can possibly be attributed to the higher percentage of failure in the apical or posterior compartment. Blood loss (35-150 ml) and complications are comparable in our study and literature. Mean surgery time was longer in our study (70 versus 30 minutes), but total hospital stay was shorter (1.1 versus 5 days). [3] Longer surgery time can partially be explained by the learning curve when performing a new operating technique.

Concluding message

Anterior site-specific pelvic organ prolapse surgery in our study shows a similar percentage of same-site failure compared with traditional anterior colporrhaphy in literature, but higher failure in other compartments and a higher number of patients requiring further pelvic organ prolapse surgery. Further research is needed to compare both methods with longer follow-up and to analyse subjective failure in further studies.

References

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Disclosures

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