

Table 1. Risk factors for serious complication (Clavien-Dindo grade III or more). Frailty model with centre as a random effect (N= 2309)

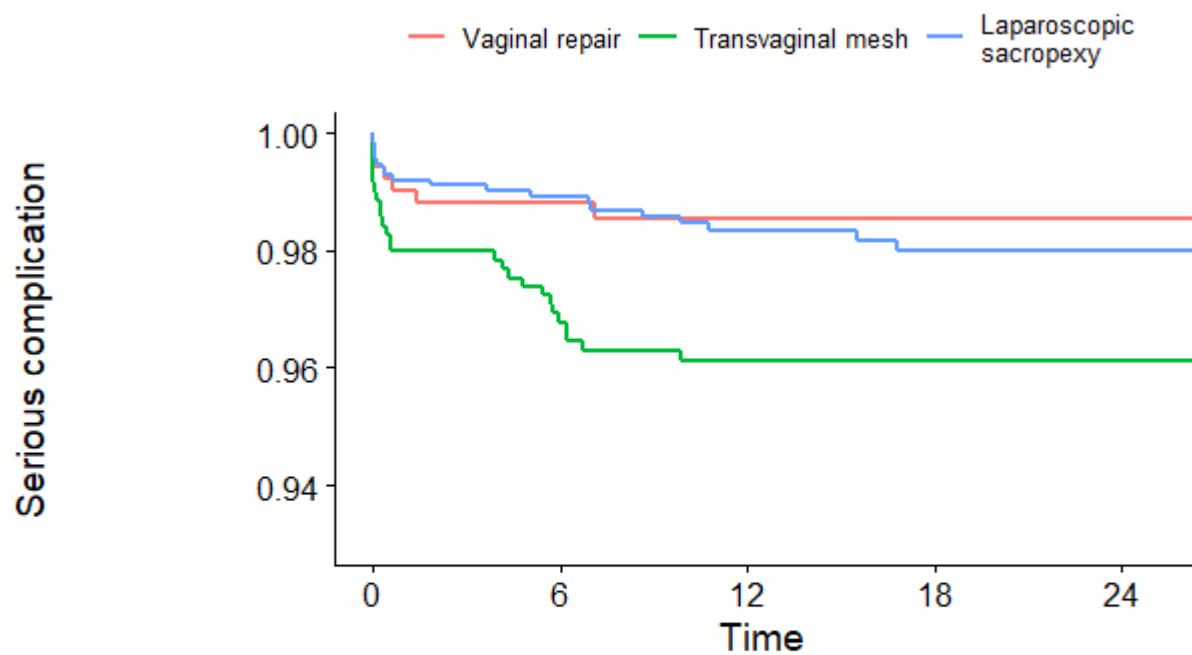
Risk factor		Non-weighted HR (95% CI)	Weighted HR (95% CI)
Surgical group	Vaginal repair	1	1
	Transvaginal mesh	3.21 (1.35 to 7.62)	3.84 (2.43 to 6.08)
	Laparoscopic sacropexy	1.61 (0.64 to 4.07)	2.48 (1.45 to 4.23)
Concomitant procedure	Total hysterectomy	2.48 (1.15 to 5.34)	4.13 (2.75 to 6.21)
	Midurethral sling	1.26 (0.59 to 2.67)	0.88 (0.54 to 1.43)

HR = hazard ratio; CI = confidence interval.

Table 2. Risk factors for reoperation for prolapse recurrence. Frailty model with center as a random effect (N= 2309)

Risk factor		Non-weighted HR (95% CI)	Weighted HR (95% CI)
Surgical group	Vaginal repair	1	1
	Transvaginal mesh	0.18 (0.07 to 0.47)	0.22 (0.13 to 0.39)
	Laparoscopic sacropexy	0.23 (0.10 to 0.50)	0.29 (0.18 to 0.47)
Concomitant procedure	Total hysterectomy	0.14 (0.02 to 1.06)	0.06 (0.01 to 0.27)
	Midurethral sling	0.45 (0.14 to 1.50)	0.59 (0.32 to 1.09)

HR = hazard ratio; CI = confidence interval.



#### No. at risk

Vaginal repair	504	389	288	194	78
Transvaginal mesh	692	629	490	329	140
Laparoscopic sacropexy	1113	957	742	543	246

Figure 1. Kaplan-Meier curve free of serious complication (Clavien-Dindo grade III or more) as a function of time (months) and of surgical group (2309 women).

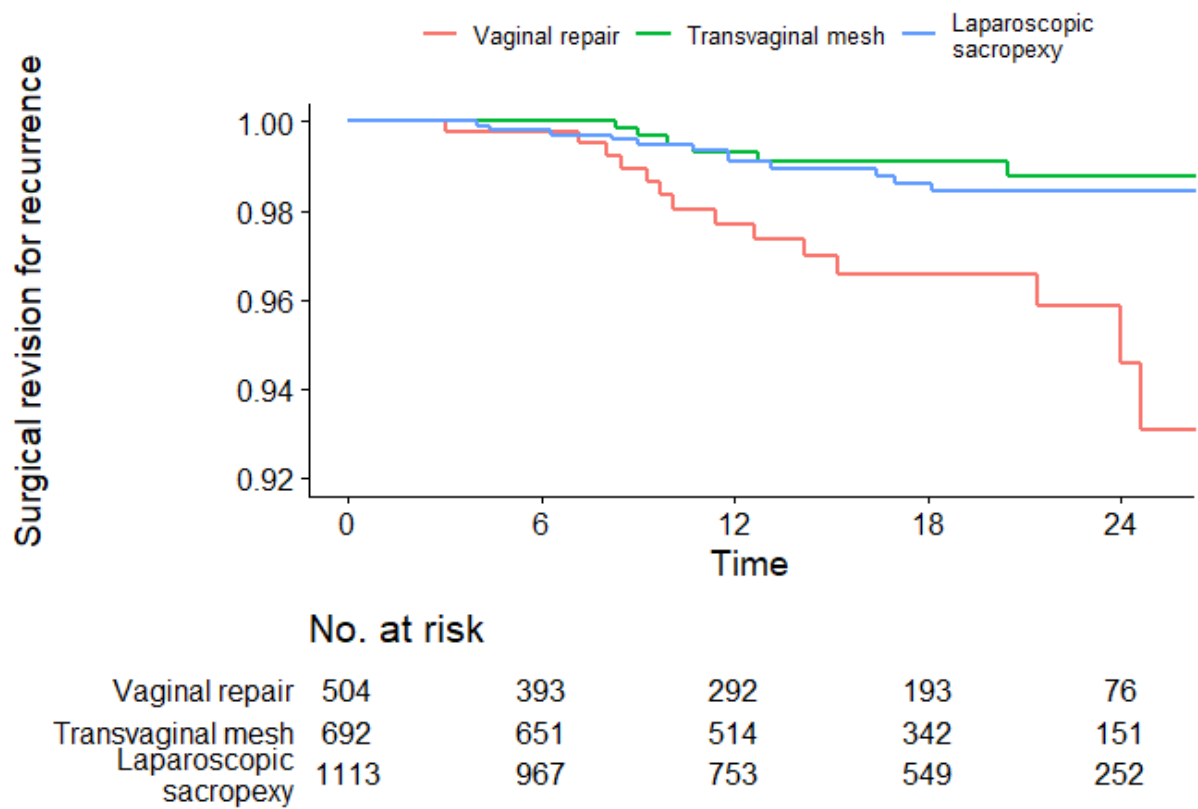


Figure 2. Kaplan-Meier curve free of reoperation for prolapse recurrence as a function of time (months) and of surgical group (2309 women).

Online supporting information

Table S1. Detail of inclusions in each centre.

Centre	Inclusions	Inclusion rate (inclusions/eligible surgeries)	Inclusion period (months)	Inclusions by month	Surgeons	Inclusions by surgeon (range)
A	425	99.1	31.5	13.5	17	25.0 (1 to 144)
B	386	93.0	32.1	12.0	9	43.0 (1 to 160)
C	330	67.8	25.8	12.8	13	25.4 (1 to 229)
D	203	44.9	26.4	7.7	15	13.5 (1 to 53)
E	201	98.5	30.5	6.6	3	67.0 (2 to 176)
F	151	94.2	33.3	4.5	12	12.6 (1 to 47)
G	115	99.1	28.7	4.0	4	28.8 (3 to 103)
H	110	93.1	30.3	3.6	2	55.0 (10 to 100)
I	98	58.8	6.9	14.2	7	14.0 (1 to 26)
J	90	74.4	32.2	2.8	5	18.0 (1 to 29)
K	59	38.1	17.2	3.4	3	19.7 (3 to 43)
L	40	87.0	5.3	7.6	3	13.3 (3 to 28)
M	34	73.9	17.3	2.0	7	4.9 (1 to 12)
N	27	88.2	5.0	5.4	4	6.8 (1 to 11)
O	16	53.3	14.5	1.1	1	16
P	9	m.d.	1.7	5.3	3	3.0 (1 to 6)
Q	9	81.8	2.3	3.9	1	9
R	3	m.d.	3.1	1.0	1	3
S	3	m.d.	0.5	6.5	2	1.5 (1 to 2)

m.d. = missing data

Table S2. Surgical procedures for pelvic organ prolapse (N= 2309).

Surgical procedures, n (%)		Vaginal repair N= 504	Transvaginal mesh N= 692	Laparoscopic sacropexy N= 1113
Anterior repair	with mesh	-	615 (88.9)	1046 (94.0)
	without mesh	227 (45.0)	20 (2.9)	7 (0.6)
Apical repair	with mesh	-	614 (88.7)	1048 (94.2)
	without mesh	322 (63.9)	58 (8.4)	9 (0.8)
Posterior repair	with mesh	-	94 (13.6)	699 (62.8)
	without mesh	333 (66.1)	295 (42.6)	26 (2.3)
Obliterative procedure (colpocleisis)		36 (7.1)	-	-
total hysterectomy		131 (26.0)	59 (8.5)	20 (1.8)
Concomitant procedures	subtotal hysterectomy	-	-	419 (37.6)
	Midurethral sling	102 (20.2)	69 (10.0)	152 (13.7)
	Burch colposuspension	-	-	56 (5.0)

Table S3. Women's characteristics at the time of the index surgery for pelvic organ prolapse (N= 2309). Comparison between surgical groups with ANOVA tests for continuous and Chi-square tests for categorical variables.

Baseline characteristics		Vaginal repair N= 504	Transvaginal mesh N= 692	Laparoscopic sacropexy N= 1113
	* Age, mean (sd)	67.0 (13.2)	69.5 (7.6)	61.8 (10.4)
	* BMI, mean (sd)	26.2 (4.9)	26.4 (4.5)	25.2 (4.0)
	* Smoking, n (%)	33 (6.5)	34 (4.9)	90 (8.0)
	* Diabetes, n (%)	48 (9.5)	82 (11.8)	74 (6.6)
	* Menopausal status	433 (85.9)	679 (98.1)	896 (80.5)
* Physical status score (ASA), mean (sd)		1.8 (0.6)	1.9 (0.6)	1.7 (0.6)
	* Hysterectomy, n (%)	132 (26.2)	145 (21.0)	140 (12.6)
	* SUI surgery, n (%)	64 (12.7)	77 (11.1)	71 (6.4)
	* POP surgery, n (%)	111 (22.0)	151 (21.8)	136 (12.2)
Surgical history	* Anterior n (%)	254 (50.4)	616 (89.0)	965 (86.7)
	* Apical n (%)	255 (50.6)	429 (62.0)	754 (67.8)
	* Posterior n (%)	309 (61.3)	271 (39.2)	425 (38.2)

\* Significant difference by surgical group.

Proportion of missing data inferior to 1.3%, except for smoking (1.7%) and physical status (3.6%).

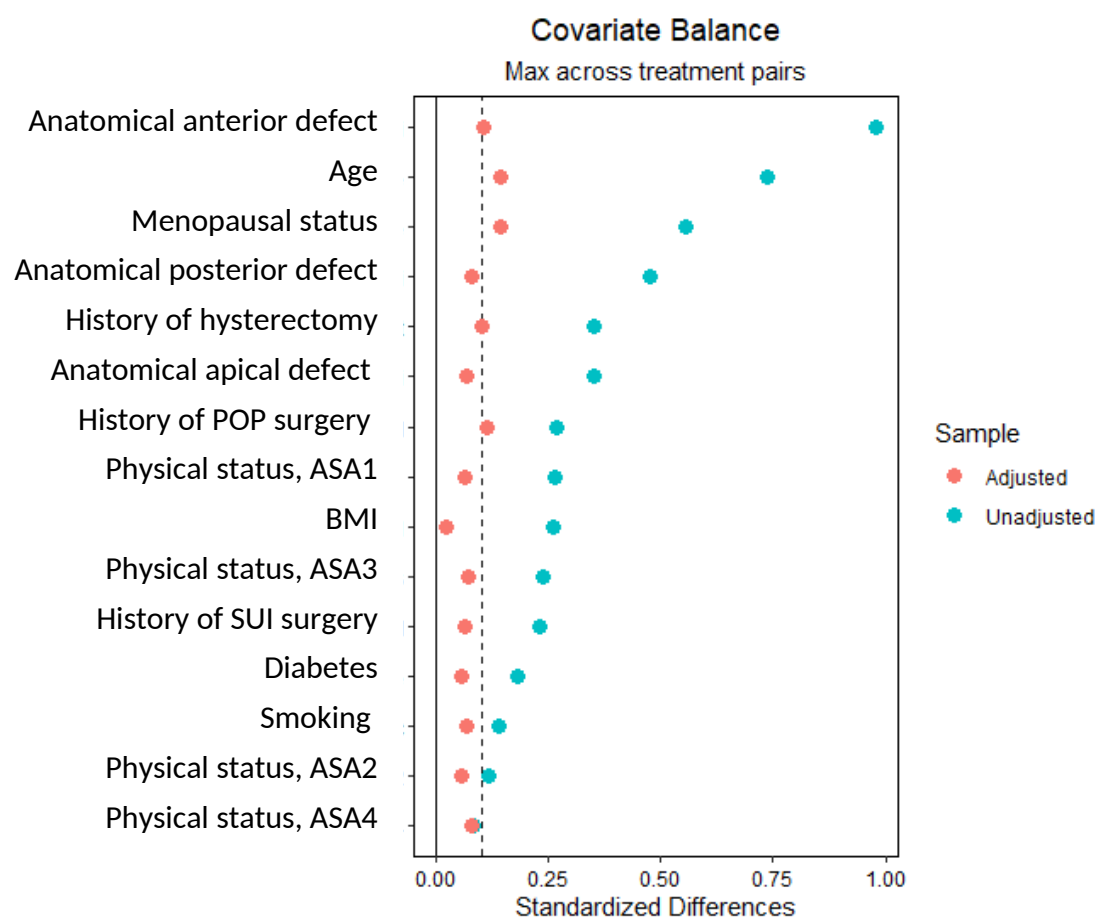
BMI = Body Mass Index; ASA = American Society of Anaesthesiologists patient classification status; SUI = Stress Urinary Incontinence; POP = Pelvic Organ Prolapse

Table S4. Description of serious complications (Clavien-Dindo Grade III or more) among 52 women by type, time to revision after POP surgery, and type of care for complication (some women may have more than one type of complication).

Grade III or IV complication, n (%)	Vaginal repair N= 504	Transvaginal mesh N= 692	Laparoscopic sacropexy N= 1113	Overall N= 2309
Intraoperative injury	-	5 (0.7)	2 (0.2)	7 (0.3)
Cardiac infarct	1 (0.2)	-	-	1 (0.0)
Haemorrhage/hematoma	4 (0.8)	6 (0.9)	1 (0.1)	11 (0.5)
Visceral complication	-	-	3 (0.3)	3 (0.1)
Pelvic abscess	-	2 (0.3)	2 (0.2)	4 (0.2)
Retention or obstructed micturition	-	2 (0.3)	1 (0.1)	3 (0.1)
Overactive bladder	-	1 (0.1)	1 (0.1)	2 (0.1)
Ureteral obstruction	1 (0.2)	4 (0.6)	1 (0.1)	6 (0.3)
Mesh exposure	-	9 (1.3)	5 (0.4)	14 (0.8)*
Vaginal granuloma	1 (0.2)	2 (0.3)	-	3 (0.1)
Incisional hernia or eventration	-	-	4 (0.4)	4 (0.4)*
Other severe postoperative or chronic pain	1 (0.2)	-	3 (0.3)	4 (0.2)
Time to revision, n (%)				
T1: 0 to 48 hours	3 (0.6)	7 (1.0)	2 (0.2)	12 (0.5)
T2: day 2 to month 2	3 (0.6)	7 (1.0)	8 (0.7)	18 (0.8)
T3: month 2 to month 12	1 (0.2)*	12 (1.7)*	7 (0.6)*	20 (0.9)*
T4: > 12 months	-	-	2 (0.3)*	2 (0.1)*
Care for complication, n (%)				
Mesh placement cancelled	-	4 (0.6)	2 (0.2)	6 (0.3)*
Intensive care unit	1 (0.2)	2 (0.3)	-	3 (0.1)
OR for haemostasis/drainage	4 (0.8)	6 (0.9)	1 (0.1)	11 (0.5)
Appendicitis/peritonitis cure	-	-	2 (0.2)	2 (0.1)
Mesh ablation	-	9 (1.3)	7 (0.6)	16 (0.9)*
Upper urinary tract procedure	-	2 (0.3)	1 (0.1)	3 (0.1)
Stitch removal	1 (0.2)	1 (0.1)	-	2 (0.1)
Vaginal revision	1 (0.2)	5 (0.7)	1 (0.1)	7 (0.3)
Hernia or eventration repair	-	-	4 (0.4)	4 (0.4)*
Pudendal infiltration	-	-	1 (0.1)	1 (0.0)
Bladder botulinum toxin injection	-	-	1 (0.1)	1 (0.0)
Overall (Grade III and IV), n (%)	7 (1.4)	26 (3.8)	19 (1.7)	52 (2.3)

\* related to the number of women at risk; OR = operating room.

Figure S1. Standardized differences between surgical groups before and after adjustment



ASA = American Society of Anaesthesiologists patient classification status; BMI = Body Mass Index; POP = Pelvic organ prolapse; MUS = midurethral sling.