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ONE-YEAR OUTCOME OF CONCURRENT ANTERIOR AND POSTERIOR TRANSVAGINAL MESH SURGERY FOR TREATMENT OF ADVANCED UROGENITAL PROLAPSE: CASE SERIES

Hypothesis / aims of study
To evaluate the safety and efficacy of performing concurrent anterior and posterior transvaginal mesh surgery using a commercially available kit for treatment of advanced urogenital prolapse (stage III or higher, Pelvic Organ Prolapse Quantification [POP-Q] system staging).

Study design, materials and methods
Forty-three patients with severe prolapse, POP-Q stage III (n=23) or IV (n=20), underwent surgery and were followed up for more than 1 year. In patients with any prolapse greater than stage I, surgery were considered to have functional failure. The Surgical Satisfaction Questionnaire was used for subjective evaluation at 1 year postoperatively. Interventions: Extensive pelvic reconstructive procedures were primarily performed using a combination of the PROLIFT anterior and posterior pelvic systems (i.e., similar to sparing the intermediate section of the PROLIFT total pelvic system). The concurrent pelvic surgery included sequential vaginal total hysterectomy, perineorrhaphy, and suburethra sling, if indicated. Additional subjective and objective evaluations included POP-Q staging, urodynamic assessment, and preoperative and 12-month postoperative questionnaires.

Results
Objective and subjective data were available for 42 patients. The subjective cure rate and objective success rate for prolapse at 12-month follow-up was 95.2%and 97.6%, respectively. Mean follow-up was 15.7 months, operation time was 79.2 minutes, operative blood loss was 109.1 mL, and postoperative hospital stay was 4.1 days. Intraoperative and postoperative complications were minor. All patients voided spontaneously before discharge. One mesh extrusion, no wound defective healing, and no rejection were observed. Two patients developed asymptomatic recurrent rectocele (stage II, POP-Q staging) that required no surgical intervention. Urodynamic parameters related to voiding dysfunction improved after surgery. Significant improvements were found using the Incontinence Impact Questionnaire and the Urogenital Distress Inventory.

Interpretation of results
Concurrent anterior TVM to correct the anterior vaginal wall with posterior transvaginal mesh to support the apex and posterior vaginal wall in pelvic reconstructive surgery is safe and effective for treatment of advanced pelvic prolapse. The concurrent anterior and posterior TVM procedure has the advantage of being faster, easier, and simpler compared with deploying a single piece of mesh requiring crossing over the apex. It ensures that no mesh protrudes at the apex, and seems to produce less mesh protrusion elsewhere at 1-year follow-up. However, further studies with longer follow-up are required to substantiate its effectiveness in treatment of prolapse.

Concluding message
Using concurrent anterior and posterior transvaginal mesh for pelvic reconstructive surgery is a safe and an effective method for treating advanced pelvic prolapse. Mesh-related complications are likely minimal, and mesh protrusion at the apex is likely to not occur.

Table 1. Demographic of the patients and prior urogynecologic surgery, n = 43

	Number of patients		Percentage
Mean age (year)*	65.38 ± 8.31	(62.8-68.0)	
Median parity*	4	(2-8)	
Mean BMI (kg/m^2)*	24.87 ± 3.28	(23.86-25.87)	
Postmenopausal	37		86.0 %
USI	13		30.2 %
Overt USI	4		
Occult USI	9		
DO	4		9.3 %
Prior pelvic surgery	14		32.6 %
VTH + A-P	5		
VTH + A-P + SS	1		
VTH + A-P + SS + TOT	1		
TAH	6		
TAH + Burch colposuspension	1		

*Data listed as either mean ± standard deviation with 95% CI in parenthesis or median with range in parenthesis.

Table 2. POP-Q data, n=42

	Pre-operative	Post-operative at 1 year	Paired *t* test (*p* value)
Aa	1.95 ± 0.94	-2.87 ± 0.33	<0.01
Ba	6.50 ± 2.27	-2.80 ± 0.67	<0.01
C	6.40 ± 2.73	-7.86 ± 1.00	<0.01

Ap	1.33 ± 1.28	-2.98 ± 0.15	<0.01
Bp	4.71 ± 2.54	-2.53 ± 0.86	<0.01
D (n=28)	5.21 ± 2.15	(n=0)	
Tvl	9.67 ± 1.34	8.69± 1.18	<0.01
Gh	5.57± 0.91	5.40 ± 0.80	0.07
Pb	3.95 ± 1.06	3.86 ± 0.87	0.456

Data listed as mean ± standard deviation with 95% CI in parenthesis.

Specify source of funding or grant	**No funding**
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	**A standard surgery that is current used for correction of POP. It is a case series study.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**