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TRANSVAGINAL MESH (TVM) RECONSTRUCTION WITH TOT SLING FOR VAGINAL PROLAPSE CONCURRENT WITH STRESS URINARY INCONTINENCE: ITS EFFICACIES ON LOWER URINARY TRACT SYMPTOMS (LUTS)

Hypothesis / aims of study

We evaluated LUTS in women with POP, and clinical efficacies of TVM reconstruction with/without TOT sling for the treatment of POP and stress urinary incontinence (SUI).

Study design, materials and methods

Between Jan. 2006 and Jan. 2008, 196 female patients with POP underwent TVM reconstruction. The mean age was 66.6 years (range, 52-84). One hundred fifty six of 196 (79%) cases showed SUI preoperatively, which was confirmed by one hour pad test or stress test with a vaginal tampon. After obtaining written informed consents, 39 patients underwent TVM alone, and 156 cases with SUI underwent TVM concomitant with TOT sling. Anterior TVM repair were performed in 145 individuals, and Anterior/posterior TVM in 51 cases. All the patients underwent evaluations consisting of determination of vaginal prolapse according to the POP quantification (POP-Q) system, international prostate symptom score (IPSS), its QOL score, International Consultation on Incontinence Questionnaires Short Form (ICIQ-SF), overactive bladder questionnaires (OAB-q), Prolapse-QOL Questionnaires (P-QOL), maximum flow rate (MFR), and postvoid residual (PVR) before and three months after the surgery.

Results

Twenty three individuals were qualified as grade II in POP-Q system, 109 and 64 were grade III and IV, respectively. All cases had cystocele including 26 cases with post-hysterectomy vaginal vault prolapse, 21 cases with a uterine prolapse and 37 cases with rectocele. POP was cured (grade 0) in 180 cases (91%) after the surgery. Although we found 4 cases with grade 2 or 3 postoperatively, all the cases showed an improvement with down-grade from grade 4. 80% of all case had LUTS (IPSS; 1 or more). Ninety individuals (45%) showed less than 8 points of IPSS (mild LUTS), 52 (27%) showed 8 to 20 (moderate LUTS), and 54 (28%) showed 20 points or more (severe LUTS). OAB-q score significantly correlated with the grades of POP-Q (p=.013). Postoperatively, all the subscores of IPSS except for nocturia, greatly improved (p<.0001), and 80% of all cases were qualified as mild (Table 1). Nocturia also showed a significant improvement; from 1.6 points to 1.3 (p=0.049). QOL score of IPSS, and ICIQ-SF significantly improved (from 5.0 to 1.0; p<.0001, and from 6.1 to 2.5; p=.01, respectively). Except for one case with TOT sling who experienced transient de-novo overactive bladder symptoms, average score of the each domain of OAB-q improved postoperatively (p<.0001). All the domains of P-QOL except for personal relationships, improved postoperatively. Insufficient improvement of the Personal relationship domain seemed due to deterioration of sexual function within relatively short-term periods after the surgery. Ten of 39 cases (25%) who underwent TVM alone showed postoperative de-novo SUI. In contrast, 152 cases (96%) who underwent TVM concomitant with TOT, experienced cure of SUI, and no patients deteriorated SUI. Among the two groups, no differences of the improvements in IPSS, QOL score, and P-QOL were observed. Although MFR did not change postoperatively, PVR improved postoperatively; from 71ml to 48 (p=.002) (Table 2).

Interpretation of results

Overall anatomical cure rate was 91%. 80% of all POP case had LUTS preoperatively. TVM improved IPSS, ICIQ-SF, OAB-q and P-QOL. The short-term efficacies of TVM reconstruction are excellent for both POP and LUTS. Concomitant TOT sling may prevent postoperative SUI.

Concluding message

TVM concomitant with TOT sling may be a reasonable option for the treatment of POP concurrent with SUI. Further studies with longer follow-up should be needed.

Table 1 LUTS grade according to IPSS before and after the TVM surgeries (n=196)

	Before (%)	After (%)
Mild LUTS	90 (45)	156 (80)
Moderate LUTS	52 (27)	27 (19)
Severe LUTS	54 (28)	1 (1)

Table 2 Changes in the parameters evaluated before and after the TVM surgeries (n=196)

	Before (SD)	After (SD)	P value
IPSS	10.8 (10.1)	4.6 (5.3)	<0.001
QOL of IPSS	4.5 (1.5)	1.8 (1.3)	<.001
ICIQ-SF	7.0 (5.7)	2.2 (3.2)	.01
OAB-q	69 (22)	89 (12)	<.0001
Qmax (ml/s)	20 (10)	18 (11)	N.S

PVR (ml)	71 (114)	48 (83)	0.02

SD: standard deviation

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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**