

MEDIUM-TERM EFFICACIES OF TENSION-FREE VAGINAL MESH (TVM) ON THE LOWER URINARY TRACT FUNCTION IN 101 WOMEN WITH PELVIC ORGAN PROLAPSE: 3-YEAR FOLLOW-UP AT SINGLE INSTITUTION.

Hypothesis / aims of study

Tension-free vaginal mesh (TVM) surgery has gained popularity in pelvic organ prolapse (POP) repair, and recent reports have shown that TVM surgery provided a comfortable short/medium-term cure rate. However, medium-term functional efficacies of TVM surgery on the lower urinary tract remain unknown. In the present study, we evaluate anatomical and functional outcomes of TVM surgery over 3-year follow-up at single institution.

Study design, materials and methods

This prospective study was performed at our institution, and included 210 consecutive women who underwent TVM surgery for POP from January 2005 to October 2007. Among them, we assessed 101 patients who had completed scheduled follow-up visits for at least 3 years (mean follow-up period; 40 months). After obtaining written informed consents, anterior TVM surgery was performed in 82 individuals, posterior TVM in 1 case, and anterior/posterior TVM in 18 cases. Eighty-three cases that had clinical or occult stress urinary incontinence (SUI), which was confirmed by one hour pad test or stress test with/without a vaginal pessary. They subsequently underwent TVM surgery concomitant with TOT sling procedure. Postoperative anatomical correction of POP was evaluated by POP-Q system at every follow-up visit. To evaluate lower urinary tract symptoms (LUTS) and the related QOL, we used International Prostate Symptom Score (IPSS), IPSS-QOL score, International Consultation on Incontinence Questionnaire Short-Form (ICIQ-SF), and overactive bladder questionnaire (OAB-q). As objective parameters, we evaluated Qmax (ml/sec) and postvoid residual (ml).

Results

The mean age was 66.8 years (range; 53-84). Twenty-three women were qualified as stage II in POP-Q system preoperatively, 44 and 34 cases were in stage III and IV, respectively. Postoperative anatomical cure rate (defined as stage 0) were 87% at 3 years after surgery (Table I). Four and Nine cases were qualified as stage I and II at 3 years, respectively. However, all the cases experienced a significant down-stage from preoperative grade IV, and did not need further repair. Sixty-seven patients (67%) showed significant LUTS according to IPSS results, (36 and 31 cases with moderate and severe LUTS, respectively) preoperatively. Preoperative, OAB-q and ICIQ-SF scores were 69 and 7.1, respectively. All symptoms in IPSS significantly improved ($p < 0.0001$), and were qualified as insignificant (mild) in 70% of cases at 3 years after surgery (figure 1). QOL score of IPSS, OAB-q and ICIQ-SF also significantly improved (from 4.3 to 1.9; $p < 0.05$, from 69 to 87.6; $p < 0.05$ and from 7.1 to 2.6; $p < 0.05$, respectively) at 3 years after surgery. During 3 years of follow up, 24 complication episodes were identified. As peri/postoperative complications, 1 bladder injury, 2 pelvic hematoma and 7 mesh erosion were noted. As LUTS-related complications, we found 8 postoperative OAB (8%) and 4 SUI (4%). Two of 4 postoperative SUI cases underwent TVM alone without concomitant TOT.

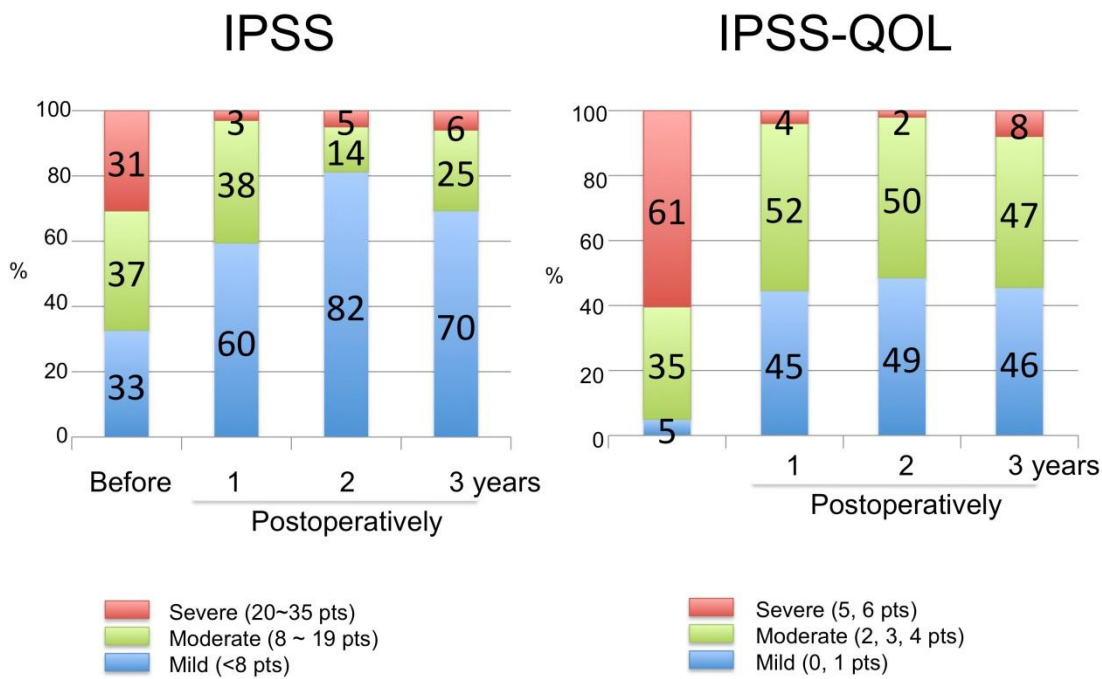
Interpretation of results

Anatomical cure rate was 87% at 3 years after TVM surgery. TVM surgery significantly improved LUTS in women with POP, and its efficacies were maintained over 3 years. Concomitant TOT surgery was likely to prevent postoperative/de novo SUI.

Concluding message

Medium-term efficacies of TVM surgery on anatomical correction and the lower urinary tract function are comfortable, and further studies with longer follow-up are needed.

Figure 1. LUTS grade according to IPSS / IPSS-QOL scores before and after the TVM surgeries (n=101)



<i>Specify source of funding or grant</i>	NONE
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Nihon University Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes