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COMPARISONS OF CLINICAL OUTCOMES BETWEEN NOVEL TAILORED TRANSVAGINAL MESH SURGERY AND VAGINAL NATIVE TISSUE REPAIR SURGERY FOR PELVIC ORGAN PROLAPSE

Hypothesis / aims of study

The use of mesh for women with pelvic organ prolapsed (POP) remains under debate, despite a recent randomized trial reported a favourable anatomic outcome of transvaginal mesh (TVM) surgery for cystocele, compared with anterior colporrhaphy [1]. Besides, the issue of preserving uterus or not in women with POP during operation is still undetermined. Thus, the aim of this study is to compare clinical outcomes of the novel tailored TVM surgeries and conventional transvaginal native tissue repair (NTR) surgeries for POP.

Study design, materials and methods

Between November 2011 and September 2014, the medical records of all consecutive women who underwent POP surgeries in a medical centre were reviewed. The choice of surgery method was according to the surgeons' preference. Clinical characteristics and intraoperative data and postoperative clinical outcomes were recorded. Wilcoxon rank-sum test was used to compare the data between two groups. Kaplan-Meier survival analysis was used to compare the recurrence rate between two groups.

Results

A total of 339 women who received surgeries for POP (170 TVM vs. 169 NTR) in a medical centre were enrolled (Table 1). Except prior hysterectomy history, baseline characteristics were not different between these two groups (Table 1). Most cases in the TVM group did not receive concomitant vaginal total hysterectomy. Contrarily, significantly higher percentage of vaginal total hysterectomy was performed in the NTR group. Significantly longer operation time was noted in the NTR group, whereas significantly larger blood loss was found in the TVM group. Significantly higher percentage of vaginal hematoma/massive bleeding and mesh extrusion were found in the TVM group; however a significantly higher incidence of prolapse recurrence was found in the NTR group (Figure 1, Log-rank test, P=0.04), especially in recurrence of cystocele.

Table 1. Baseline characteristics and clinical outcomes of women who underwent pelvic organ prolapse surgeries

Variables	TVM (n=170)	Native tissue repair (n=169)	†P
Age (years)	63.6±10.4	64.2±10.5	0.76
Parity	3.2±1.2	3.2±1.5	0.88
Menopause	146 (86)	141 (83)	0.53
Prior hysterectomy	33 (19)	12 (7)	0.001
Prior incontinence surgery	10 (7)	6 (4)	0.31
Prior prolapse surgery	14 (8)	9 (5)	0.29
Surgeries			
Anterior compartment			
ATVM vs. anterior colporrhaphy	160 (94)	154 (91)	0.29
Middle compartment			
VTH	4 (2)	129 (77)	<0.001
SSS	1 (1)	127 (75)	<0.001
Trachelectomy/Manchester operation	13 (8)	4 (2)	0.04
Posterior compartment			
PTVM vs. posterior colporrhaphy	106 (63)	160 (95)	<0.001
Concomitant surgeries			
Midurethral sling	6 (6)	14 (8)	0.06
Operation time (minutes)	92.6±40.9	103.1±27.4	0.003
Blood loss (mL)	135.2±145.5	56.6±43.8	<0.001
Follow-up interval (months)	20.7±9.4	26.8±14.0	<0.001
Perioperative complications			
Vaginal haematoma or massive bleeding	6 (4)	0 (0)	0.03
Voiding difficulty	8 (5)	2 (1)	0.10
Postoperative complications			
Mesh extrusion	13 (8)	0 (0)	<0.001
Postoperative failure			
Cystocele	0 (0)	10 (6)	0.001
Uterine or vaginal stump prolapse ≥ stage 2	3 (2)	6 (4)	0.34
Rectocele	0 (0)	2 (1)	0.25

Values are expressed as the mean ± standard deviation or patient number (percentage).

†By chi-square test, Fisher's exact test or Wilcoxon rank-sum test.

‡ATVM = tailored anterior transvaginal mesh surgery; PTVM = tailored posterior transvaginal mesh surgery; SSS = sacrospinous ligament suspension; TVM = transvaginal mesh surgery; VTH = vaginal total hysterectomy.

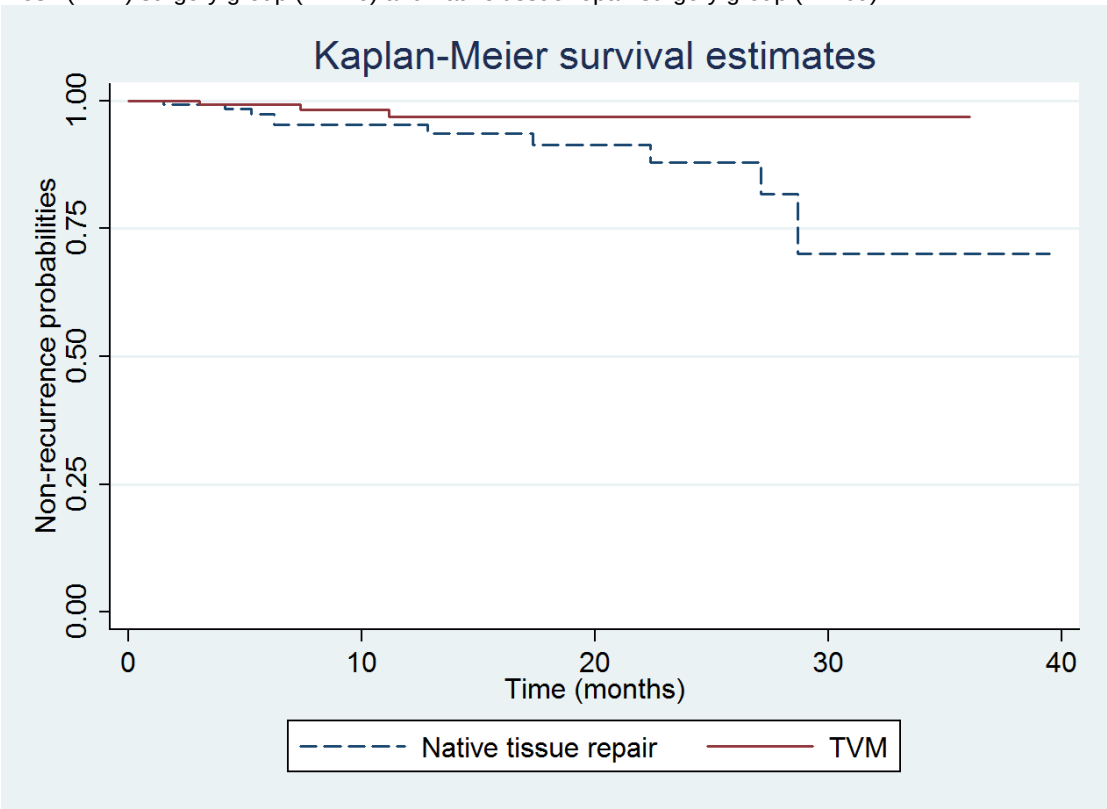
Interpretation of results

Most cases in the TVM group underwent novel tailored vaginal mesh surgeries with preserving the uterus, whereas most cases in the NTR group received vaginal total hysterectomy. Despite of a higher complication rate in the TVM group, however, these complications were not difficult to resolve, and most complications were minor. In contrast, women in the NTR group had a higher recurrence rate postoperatively.

Concluding message

Despite of a higher complication rate, the TVM group utilizing novel tailored mesh surgeries with preserving the uterus had a low incidence of prolapse recurrence rate, especially for cystocele repair.

Figure 1. Non-recurrence probabilities for women who underwent pelvic organ prolapse surgeries between tailored transvaginal mesh (TVM) surgery group (n=170) and native tissue repair surgery group (n=169)



References

1. Altman D, Väyrynen T, Engh ME, et al. Anterior colporrhaphy versus transvaginal mesh for pelvic-organ prolapse. N Engl J Med 2011;364:1826–1836.

Disclosures

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