

POP REPAIR WITH TROCAR-GUIDED TRANS-VAGINAL MESH SURGERY. NOT ONLY ANATOMIC RESULTS BUT ALSO IMPACT ON URINARY INCONTINENCE AND FUNCTIONAL OUTCOMES

Hypothesis / aims of study

The primary objective of our study was to assess the effect on continence of trocar-guided transvaginal mesh for pelvic organ prolapse surgery in patients with at least 2-years follow-up. Our secondary objectives were anatomical correction, relief of symptoms and effect on quality of life (QoL).

Study design, materials and methods

Patients with symptomatic stage ≥ 2 POP were included in this study.

Primary outcomes was evaluation of post-operative incontinence (using the Ingelman-Sundberg scale) (1).

Secondary outcomes were: 1) objective anatomical results (objective cure for points Ba, C and Bp was at stage 0, and satisfactory at stage 1); 2) resolution of symptoms; 3) evaluation of quality of life. Pre- and post-operative urodynamics results were also evaluated.

Statistical analysis: McNemar chi-square test, paired t-test and Mann-Whitney test

Results

We enrolled 81 women were (mean age 67.76), that underwent vaginal prolapse repair with mesh placed via double trans-obturator approach (Perigee™ System). In 31 patients a vaginal hysterectomy was performed. We included in the final evaluation 72 patients with at least 2 years follow-up.

Pre-operatively SUI was present in 32 patients and urgency urinary incontinence in 44 patients. Post-operatively 6 patients (14%) developed *de-novo* SUI (grade I in 5 pats and grade II in 1 pat). In the pre-op incontinent group, among 20 patients with grade I SUI, 13 (65%) became continent and 7 (35%) showed persistent low grade SUI. In the 12 patients with grade II/III SUI, 5 (41.6%) became continent, 6 patients (50%) had a grade I and 1 patients had a grade II SUI. Only two patients decided to undergo subsequent SUI surgery (TVT). (Table 1)

Table 2- pre and post-op classification of SUI according to Ingelman-Sundberg scale

	Pre-operative	Post-operative
SUI Grade 0	40/72 pats (55.6%)	34/40 pats (85%) grade 0 5/40 pats (12.5) grade 1 1/40 pats (2.5) grade 2
SUI Grade I	20/72 (27.8%)	13/20 pats (65%) grade 0 7/20 pat (35%) grade I
SUI Grade II/III	12/72 (16.7%)	5/12 pats (41.6%) grade 0 6/12 pats (50%) grade I 1/12 pats (8.3%) grade II

Beyond this, we had a significant improvement in storage, voiding, post-micturition, and prolapse-related symptoms and in 10 cases we observed a mesh exposure.

We had an anatomical cure rate for the anterior compartment in 80.8% of the sample and for the apical segment in 91.4%. In 6 out of 7 patients apical recurrences occurred when uterus was not removed during POP surgery. No recurrences in patients who underwent concomitant hysterectomy. For the posterior segment, the anatomical cure rate was observed in 93.1% of the sample.

Urodynamics showed a post-op statistically significant reduction of detrusor pressure at maximum flow and a statistically significant increase in maximum flow Detrusor overactivity (DO), present pre-operatively in 25 patients, disappeared in 56% of cases. In 4 pats DO appeared "de novo".

As regards the impact of this kind of surgery on QoL The King's Health Questionnaire showed patients reported better scores in all domains except personal relationship. Comparing the results of KHQ of post-operative continent and incontinent patients we found no significant differences.

Interpretation of results

To date there is no consensus on the relative advantages and disadvantages of performing routine prophylactic continence surgery for all women with severe urogenital prolapse (2).

Our study demonstrates that the use of prophylactic or therapeutic anti-incontinence procedure at the time of trans-vaginal POP-repair with the use of trans-obturator mesh is an overtreatment. In the preoperative continent patient, incontinence appeared "de novo" in 14% of the cases while in the pre-operative incontinent patients, 56.3 % resolved with only POP-repair and another 40% presented a low grade incontinence, clinically not relevant for their QoL.

Concluding message

Trocar-guided transvaginal mesh surgery for severe POP showed excellent results regarding the anatomical and functional outcome.

In case of severe uterine prolapse hysterectomy should be performed to avoid recurrences.

References

1. Ingelman-Sundberg A. Urinary incontinence in woman, excluding fistulas. Acta Obstet Gynecol Scand 1952; 31: 266-291.
2. Borstad E, Abdelnoor M, Staff AC, Kulseng-Hanssen S Surgical strategies for women with pelvic organ prolapse and urinary stress incontinence. Int Urogynecol J Pelvic Floor Dysfunct 2010; 21(2):179–186.

Disclosures

Funding: No source of funding or grant **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** This study was approved by the Internal Board Review of the University of Perugia **Helsinki:** Yes **Informed Consent:** Yes