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# COMPARISON OF LAPAROSCOPIC COLPOSUSPENSION, CLASSICAL COLPOSUSPENSION AND TENSION-FREE VAGINAL TAPE TREATMENT OF STRESS URINARY INCONTINENCE IN TERMS OF LONG TERM SUBJECTIVE ASSESSMENT

**Comparison of laparoscopic colposuspension, classical colposuspension and tension-free vaginal tape treatment of stress urinary incontinence in terms of long term subjective assessment**

**Aims of study:** To compare three different surgical procedures for stress urinary incontinence (SUI): laparoscopic colposuspension (Lpsc Colp), classical colposuspension (Colp) and pubovaginal tension-free vaginal tape (TVT). Our primary aim was to analyze subjective continence and self-evaluation of the quality of life six to nine years after surgery.

**Study design, materials and methods:** To 134 women, operated on for SUI in the period between January 2000 and December 2003, ICIQ-UI short form questionnaire was sent in December 2009 (1). Questions about any subsequent surgical or medical treatment of urinary incontinence were added. Based on the answers obtained from section 6 of the questionnaire, we determined the type of urinary incontinence: stress (SUI), urge (UI) or mixed urinary incontinence (Mix), or no symptoms at all. As this was a retrospective analysis of all surgeries performed in the said period, power calculation was not needed. Answers and scores were analyzed using Mann-Whitney test and Chi-Square test.

**Results:** Of the 134 women, 87 responded, the response rate was 64.9%; 26 women underwent classical colposuspension, 34 TVT and 27 laparoscopic colposuspension. The mean postoperative follow-up was 7.48 years (range 6-9 years). The TVT group women were significantly older, whereas the women that underwent classical colposuspension needed subsequent surgical treatment significantly more frequently (Table 1). TVT was the surgical treatment applied in all cases of subsequently required surgical treatment.

Table 1. Age, additional surgical and medical treatment in the three groups

| | Lpsc Colp n (%) | Colposuspension n (%) | TVT n (%) | P value |
|---|---|---|---|---|
| Age (SD) (years) | 46.37 (6.86) | 47.65 (6.24) | 50 (11.02) | 0.001 |
| Subsequent surgical treatment | 5 (18.5) | 8 (30.8) | 2 (5.9) | 0.025 |
| Subsequent medical treatment | 2 (7.4) | 1 (3.8) | 4 (11.8) | 0.53 |

Answers from the ICIQ-UI short form were analysed only for the women that did not require subsequent surgical treatment (n = **72)**. There was no statistically significant difference among the groups ($\chi^2$ P=0.166) in no symptoms at all, symptoms of stress, urge, or mixed urinary incontinence (Table 2).

Table 2. Type and frequency of urinary incontinence according to section 6 of the ICIQ-UI short form.

| | Lpsc Colp n (%) | Colposuspension n (%) | TVT n (%) |
|---|---|---|---|
| No symptoms | 2 (9.1) | 7 (38.9) | 8 (25) |
| SUI | 6 (27.3) | 4 (22.2) | 5 (15.6) |
| UI | 2 (9.1) | 0 | 6 (18.8) |
| Mix | 12 (54.4) | 7 (38.9) | 13 (40.6) |

There was also no statistically significant difference in the impact of urinary incontinence on everyday life (quality of life score) among the groups (ICIQ-UI, section 5): laparoscopic colposuspension 5.86 ± 3.76, classical colposuspension 4.17 ± 4.06 and TVT 4.53 ± 3.94.

**Interpretation of results:** The ICIQ-UI short form self-administered questionnaire was used deliberately to evaluate long term efficiency of three different surgical procedures for SUI, because it represents the patient perspective of successfulness of the treatment, and enables differentiation of the type of urinary incontinence (1). The questionnaire was sent to the patient with a return-envelope added. It remains unclear whether a relatively low response rate was due to dissatisfaction with the treatment result or to ~~mostly~~ neglect.
The ~~C~~comparison of the obtained ~~ng our~~ results with the data in ~~from~~ the literature was surprising~~e were surprised~~ (2,3). Although these were ~~Even if we consider them as~~ self reported symptoms ~~only~~, not confirmed by clinical examination or urodynamic testing, the number ~~s~~ of completely dry patients was~~ere~~ extremely low. Bearing in mind the women had provided ~~Because this were~~ long term results it is hard to believe that they were the consequence of poor surgical technique. One of the reasons might ~~could~~ be a relatively high number of the patients, reporting symptoms of mixed urinary incontinence, whereas stress and urgency symptoms remained within the expected range. In the cases of mixed urinary incontinence, the symptoms of urgency incontinence may predominate either due to postoperative irritation or to a relative urethral obstruction. However, urge

symptoms could have remained unrecognized as predominant symptoms before operation, or they could simply be the consequence of upcoming menopause of most operated patients.

Despite the low cure rate in terms of dryness, the quality of life score ~~was~~ reported was within the acceptable range. It did not differ among the three groups suggesting that long term results from the patients' perspective of all three procedures were relatively equal in treating stress urinary incontinence. The fact that additional procedures were more frequently needed in both colposuspension groups suggests that the TVT operation is ~~as~~ most efficient ~~useful in~~ treatment of ~~ing~~ stress urinary incontinence.

**Concluding message:** From the patients' perspective, the three most common surgical techniques for stress urinary incontinence provided relatively equal low long term success rates, TVT providing the best.

References


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| ***Specify source of funding or grant*** | **None** |
| ***Is this a clinical trial?*** | **Yes** |
| ***Is this study registered in a public clinical trials registry?*** | **No** |
| ***Is this a Randomised Controlled Trial (RCT)?*** | **No** |
| ***What were the subjects in the study?*** | **HUMAN** |
| ***Was this study approved by an ethics committee?*** | **Yes** |
| ***Specify Name of Ethics Committee*** | **Komisija Republike Slovenije za medicinsko etiko**<br>**National Medical Ethics Committee, Republic of Slovenia** |
| ***Was the Declaration of Helsinki followed?*** | **Yes** |
| ***Was informed consent obtained from the patients?*** | **Yes** |