The clinical effectiveness of transobturator midurethral sling (T-sling) with additional 2-point tape fixation performed on inpatient and outpatient basis.

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Hypothesis / aims of study
Nowadays midurethral sling are considered as a gold standard for stress urinary incontinence (I) [Fig. 1]. Traditionally, this technique has been followed by hospitalization and short inpatient convalescence. From both patient and physician perspective, this technique became increasingly popular due to very high clinical effectiveness, fast recovery, no need of painful incisions or overnight hospital stays. The aim of the study was to compare the efficacy and safety of transobturator monofilament sling (T-sling-Herda Mesh, Italy) with additional 2-point tape fixation in the treatment of stress urinary incontinence in women operated on inpatient and outpatient basis [Fig. 2].

Study design, materials and methods
192 women with stress urinary incontinence were included into the study. Patients were randomly allocated to inpatient or outpatient group at a ratio of 1:1. All patients underwent clinical and urodynamic evaluation before surgical treatment, had a positive cough stress test and post-void residual urine was less than 10 ml. Exclusion criteria were as follows: previous urogynecological surgery, detrusor overactivity on urodynamic studies, advanced urogenital prolapse (pelvic organ prolapse quantification scale [POP-Q] grade III, IV). In both groups 2 absorbable sutures parallel to the urethra were added to fix the tape and prevent displacement during tape insertion. [2] Surgery was done by 2 (TRAW) surgeons. Using identical surgical technique, all patients had a monofilament tape inserted at the midurethra. Patients were discharged home after the first situation (outpatient group) or 2 days (inpatient group) postoperatively. Final clinical effectiveness was assessed after 12 months follow up. Success was defined as lack of any leakage during coughing and a negative cough stress test. The subjective cure rate was determined by Sandvik test after 12 months.

Statistical analysis was performed using the Statistics 7.1 pf. The Shapiro-Wilk test was used to examine compatibility of the Mann-Whitney U test was applied for statistical comparison of the results between outpatient and inpatient group.

The chi² test was used to compare the results of Sandvik severity index. The results are shown as follows: the arithmetic means and standard deviation (SD). P level of ≤ 0.05 was considered as statistically significant.

Results
There were no differences in patients’ parity, rate of postmenopausal status, pelvic floor defects, prostatitis bladder neck mobility and mean Valulva leak point pressure in the preoperative urodynamic study. Comparison of the peri- and postoperative results comprising complications and symptoms of voiding function revealed no significant differences between the two groups. Operation time, change in hemacrit, spontaneous voiding time and urinary infection were also not different. There was no significant difference between the two groups in terms of the cured rate (chi²=0,039, p=0,133) [Tab. 1]. The only difference referred to body mass index (mean 26,6±3,9 vs 28,67±3,99; p<0,001) and age (50,48±9,71 vs 61,7±9,2; p=0,00056) [Tab.I]. Patients were discharged home after the first situation (outpatient group) or 2 days (inpatient group) postoperatively. Final clinical effectiveness was assessed after 12 months follow up. Success was defined as lack of any leakage during coughing and a negative cough stress test. The subjective cure rate was determined by Sandvik test after 12 months. Statistical analysis was performed using the Statistics 7.1 pf. The Shapiro-Wilk test was used to examine compatibility of the Mann-Whitney U test was applied for statistical comparison of the results between outpatient and inpatient group. The chi² test was used to compare the results of Sandvik severity index. The results are shown as follows: the arithmetic means and standard deviation (SD). P level of ≤ 0.05 was considered as statistically significant.

Interpretation of results
The main factor that determines the effectiveness of surgical treatment of stress urinary incontinence is proper surgical technique but not the time of hospitalization. Tape fixation is a simple surgical maneuver that seems to improve transobturator sling effectiveness and does not markedly increase procedure duration or cost of the treatment.

Concluding message
Outpatient surgery for stress urinary incontinence using midurethral sling ensures the same cure and satisfaction rates as inpatient one, allows to reduce costs of treatment without compromising clinical effectiveness.

References:
2. Tomasz Rechberger, Izabela Winkler, Łukasz Nowakowski, Katarzyna Perzyło, Andrzej Wróbel, Department of Gynecology, Medical University of Lublin.