

PREDICTIVE FACTORS FOR ACUTE URINARY RETENTION AFTER TRANSOBTURATOR TAPE (TOT) PROCEDURE FOR FEMALE STRESS URINARY INCONTINENCE

Hypothesis / aims of study

To assess the predictive factors related to acute urinary retention (AUR) after a trans-obturator tape (TOT) procedure for female stress urinary incontinence.

Study design, materials and methods

We retrospectively analyzed the records of 219 women with a follow up of at least 12 months who underwent the TOT procedure between March 2005 and May 2007 at our institution. We analyzed patient characteristics, symptoms and urodynamic parameters with regard to AUR. Chi-square test, student t-test and logistic regression analysis were used for statistical analysis.

Results

28 patients (12.78%) showed AUR in the immediate post operative period. 23 patients regained normal voiding without a specific procedure and 5 patients needed tape cutting due to prolonged urinary retention. Univariate analysis demonstrated that maximal urinary flow rate (Qmax), post void residual urine volume (PVR), previous anti-incontinence surgery and presence of preoperative obstructive voiding symptoms predicted urinary retention. On multivariate analyses the Qmax, PVR and previous anti-incontinence surgery were the significant independent predictive factor ($p = 0.001$, 0.02 and 0.017, Odds ratios= 0.801, 1.037, and 8.964, respectively). The overall satisfaction rate did not show statistical differences between the AUR group and non AUR group (90.05% vs 85.71%, p value=0.508). Still, the global satisfaction rate according to the need for tape cutting showed significant difference (58.5% vs 92.07%, respectively)

Interpretation of results

Qmax, PVR and previous anti incontinence surgery could predict women at risk for postoperative urinary retention.

Concluding message

Maximal flow rate and post void residual urine are variables that can be used as the predictor for acute urinary retention after TOT procedure. Moreover patients with previous history of anti incontinence surgery need more caution to prevent AUR after TOT procedure and informed consent should be given preoperatively.

Table 1. Preoperative urodynamic parameters according to development of acute urinary retention.

	Retention group	Non retention	P value
Pdetmax	29.82 ± 14.91	26.39 ± 11.44	0.156
Pdet Qmax	20.89 ± 10.63	18.62 ± 9.93	0.264
VLPP	71.96 ± 32.12	63.80 ± 29.98	0.183
Free uroflowmetry			
Qmax (ml/sec)	16.57 ± 4.98	26.71 ± 8.70	0.001
PVR	42.3 ± 39.22	16.23 ± 17.57	0.001

Pdetmax for maximal detrusor pressure

PdetQmax for maximal detrusor pressure at maximal flow rate

VLPP for valsalva leak point pressure

Qmax for maximal flow rate

PVR for post void residual urine

Table 2. Logistic regression analysis for postoperative acute urinary retention after TOT procedure

	P value	Odd ratios
Qmax	0.001	0.80
PVR	0.003	1.03
Previous anti incontinence surgery	0.012	10.18
Concomitant pelvic surgery	0.224	

Qmax for maximal flow rate

PVR for post void residual urine

References

1. Hong, B., Park, S., Kim, H. S. et al.: Factors predictive of urinary retention after a tension-free vaginal tape procedure for female stress urinary incontinence. J Urol 2003; 170: 852.
2. Klutke, C., Siegel, S., Carlin, B. et al.: Urinary retention after tension-free vaginal tape procedure: incidence and treatment. Urology 2001; 58: 697.

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<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	Yes
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	it is a retrospective study
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes