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### **T.O.T.® : CLINICAL OUTCOME IN ELDERLY FEMALE PATIENTS WITH STRESS URINARY INCONTINENCE.**

#### **Hypothesis / aims of study**

T.O.T.®, a new minimally invasive treatment for female urinary incontinence has been invented by E.Delorme (1) and the first clinical data were published in France in 2001. The purpose of this study is to examine the results of the T.O.T.® technique in elderly women.

#### **Study design, materials and methods**

Between November 2001 and January 2004, 292 consecutive patients with Stress Urinary Incontinence underwent for T.O.T.® procedure (Uratape® or Obtape®, non elastic polypropylene tapes). Among them, 51 patients were more than 70 years old. Pre-operatively history, physical examination, urodynamic testing and residual were evaluated. The post-operative evaluation was: physical examination, uroflowmetry and residual. Mean age was 76 years (70-88) and mean parity 2.3 (0-6). All the patients were post-menopause. 19/51 (37.3%) patients had pure stress urinary incontinence, 8/51 (15.7%) reported also urgency, and 24/51 (47%) had mixed incontinence. 20/51 (39.2%) patients had history of previous hysterectomy, and 11/51 (21.6%) were already treated for prolapse. 7/51 (13.7%) had been previously operated for stress urinary incontinence. 7/51 (13.7%) patients had urethral closure pressure <20 cm of water. Anaesthesia was general for 32 patients, spinal for 17 patients and local for 2.

#### **Results**

Mean follow up was 11 months (2.6-23.7). No peri-operative complication occurred. 2 patients had tape release 10 days after surgery because of residual >100ml. 2 patients complained about transient pain at the level of the insertion site of the tunneller. We compared the efficacy rate between patients older than 70 years and patients less than 70 years, and we didn't find any statistical difference between the 2 continence rates (80.4% and 84.2% respectively). Among the 32 patients suffering from urgency or urge incontinence, the urgency disappeared for 15 (46.8%) patients, improved for 10 (31.2%), were identical for 5 (15.6%) and got worse for 2 patients (6.2%). Among the 19 patients with pure stress incontinence 1 patient (5.3%) complained from *de novo* urgency. Pre-operative and post-operative uroflowmetry, residual and duration of the micturition were analysed for 17 patients, as shown in table 1.

Table 1: Pre-operative and post-operative uroflowmetry

Uroflowmetry parameters	Pre-operative N= 17	Postoperative at >12 months follow-up N= 17	p
Maximum Flow rate (ml/s)	37.9±15.6	27.1±7.6	<0.02
Voiding time (s)	26.3±12.2	30.1±18.8	NS
Residual (ml)	14.7±48.2	24.7±39.2	NS

Data are presented as mean ± standard deviation, NS=not significant. Univariate analysis.

Only 1 patient had a Qmax<15ml/s (14 ml/s) but without any residual.

#### **Interpretation of results**

Elderly patients are frequent patients for incontinence surgery, so it was important to study the efficiency of T.O.T.® in this specific sub-group of patients. Structural modifications of the bladder as well as modifications of urethral sphincteric innervation are often associated with aging. Despite of these "negative" elements we didn't find in this series any difference in the continence rate between elderly patients and patients under 70 years old, contrary to what was previously reported (2). In addition we observed in this series a very low rate of *de novo* urgency (5.3%) compared to other series (2) and a very low rate of immediate voiding

difficulties. These low rates could be explained by the horizontal placement of the tape and the non elasticity of the T.O.T.® which makes the adjustment of the tension easier.

### **Concluding message**

T.O.T.® is an efficient procedure for treatment of elderly patients suffering from stress urinary incontinence, associated with a low rate of post-operative voiding dysfunction and a low rate of *de novo* urgency.

### **References**

1. Transobturator urethral suspension: a minimally invasive procedure to treat female stress urinary incontinence. *Prog Urol* 2001;11:1306-13. *Article in french*
2. Results of the Tension-Free Vaginal Tape Technique in the Elderly, *European Urology* 44 (2003) 128-131.