

## DOES THE MONARC® TRANSOBTURATOR SUB-URETHRAL SLING CAUSE POST-OPERATIVE VOIDING DYSFUNCTION? A PROSPECTIVE STUDY.

### Hypothesis / aims of study

This aim of the study was to compare pre and post-operative voiding parameters following insertion of the Monarc® transobturator sub-urethral sling (TOSUS), for the treatment of women with urinary stress incontinence.

Voiding function changes after retro-pubic procedures although it is not clear whether this has any long term clinical significance(1). The trans-obturator technique may offer a sub-urethral sling that is more anatomically correct as it mimics the sub-fascial hammock under the urethra(2), and therefore it may also reduce the risk of voiding dysfunction.

### Study design, materials and methods

This was a prospective study with all women completing validated questionnaires, IIQ-7, UDI as well as undergoing urodynamic investigation, pre-operatively and post-operatively at 7 weeks (6-12 weeks). All of the women who underwent surgery had urinary stress incontinence. The initial study group included 75 women, of which 62 women had complete data. Parameters used to assess voiding function included symptoms of voiding difficulty, (incomplete emptying and irritative symptoms), as well as objective parameters. These included maximum flow rate ( $Q_{max}$ ), adjusted maximum flow rate ( $Q_{max\ adj}$ ) using the Liverpool nomogram (LN), maximal urethral pressure (MUP), post-void residual (PVR), PVR >50mls, and  $Q_{max\ adj} < 10^{th}$  centile LN.

### Results

The results have been tabulated below.

	Pre-op	Post-op	P value
Q5 Do you have difficulty passing urine?	8 (12%)	32 (52%)	P<0.0001 **
Q6 Do you feel you don't empty your bladder	32 (52%)	37 (58%)	P=0.283 **
Quality of Life	29	8	P<0.0001 **
Urinary stress incontinence	62	7	89% *
Satisfaction		50	81%
$Q_{max}$	24.7 mls/sec	21.7mls/sec	p= 0.064 trend*
Liverpool nomogram $Q_{max}$	29.9	22.9	p <0.05 *
PVR	13.2 mls	19.2 mls	p=0.256 NS *
PVR > 50 mls	5(8%)	7 (11%)	P= 0.61 NS *
Catheter > 2days		5 (8%)	
No < 10th C nomogram	10	12 (19%)	P=0.534 NS *
U/D voiding dysfunction	3	1	P= 0.625 NS *

\*Wilcoxon Matched-Pairs Signed-Ranks Test were used for non-parametric tests.

\*\* McNemar test.

### Interpretation of results

Although there were significantly greater symptoms of voiding dysfunction post-operatively the only objective change was adjusted flow rates ( $Q_{max\ adj}$ ). There was a high satisfaction with the procedure and short term cure rates were similar to those published with the TVT®. In particular it should be noted the very low acute retention rates.

### Concluding message

The change in free flow rates is similar to that seen with other sub-urethral sling techniques and as previous studies have suggested, may reflect a return to a more normal voiding pattern post-surgery, rather than being truly obstructive(3). Subjective changes in voiding symptoms were significant, but didn't alter the satisfaction rates post-operatively. It remains to be seen whether voiding function continues to change in the long term. Further long term assessment at one year is planned.

### **References**

1. Int Urogynae J 2003 Vol 15, 1, 35-46
2. Progres en Urologie 2001, 11 , 1306-1313.
3. Abstract 200(194). 28<sup>th</sup> Annual Meeting IUGA, Buenos Aires.