

## TRANSOBTURATOR (TO) T-SLING (HERNIAMESH) FOR THE TREATMENT OF STRESS URINARY INCONTINENCE: 3 YEARS FOLLOW UP STUDY.

### Hypothesis / aims of study

The aim of this study was to test the effectiveness and tolerance of a new partially absorbable sling delivered by TO access for the treatment of type II SUI. The sling was designed to prevent chronic retention and urethral erosion associated with traditional synthetic polypropylene slings.

### Study design, materials and methods

The Herniamesh T-Sling is composed of two different materials: the two wings are composed of a non-absorbable 1,1 cm wide monofilament polypropylene (PP) mesh with a 1 cm central section made of absorbable monofilament of polydioxanone (PDO).

We recruited 27 patients from February 2004 to January 2007, with a mean follow up of 20 months (ranging from 3 to 36 months).

20 were affected by type II SUI, 4 had SUI masked by a 3°-4° degree prolapse according to Baden and Walker classification, and 3 patients presented mixed incontinence. 18 patients (66.7%) presented significant vaginal prolapse ( $\geq 2^\circ$  degree) and they have been treated with cystopexy, before sling implantation. All patients had a voiding diary, preoperative urodynamics studies, urinary questionnaire and preoperative POP-Q test.

20 patients have been treated under spinal anesthesia and 7 under general one.

The vaginal mucosa is incised longitudinally under the bladder neck; a sharp dissection was made to expose the inferior surface of urethra and lateral pelvic sidewalls. T-Sling was introduced through transobturator approach in all patients. When possible "Valsalva cough test" was performed to assess the appropriate tension on the T-Sling.

*Cure* was defined as grade 0 or I anterior wall prolapse according to Baden Walker classification and complete remission of stress urinary incontinence symptoms. *Improvement* was defined as daily number reduction of urinary losses and a lower prolapse grade by the preoperative one.

### Results

Urinary stress incontinence remission was reached in 23 patients (85.2%). Improvement was found in 3 patients (11%). Only 1 patient (8,7%) developed "de novo urge incontinence", with an increased daily urinary loss. There were no major complications or bladder damage. Only 1 patient presented, after 60 days from the operation, a monolateral para-labial abscess, which was completely cured after 2 weeks of antibiotic therapy. POPQ "Aa" value had mean reduction of 2.88 cm (IC 95% 2.19 – 3.59, p .000), "Ab" value had mean reduction of 3,4 cm (IC 95% 2.63 – 4.18, p .000). No incidence of cystocele recurrence has been showed in the short term follow up, but we observed 3 cystocele recurrences (11%) at 24, 26 and 27 months.

### Interpretation of results

Transobturator vaginal implantation of partially absorbable tension-free T-sling is associated with a significant improvement of type II stress urinary incontinence. The surgical procedure is technically simple, showed no perioperative complications, brief hospital stay and no significant morbidity in the short term. T-Sling with its central PDO absorbable portion avoids de novo bladder instability, obstruction and mesh erosion while its lateral nonabsorbable portion (PP) prevents urethral instability recurrence.

### Concluding message

TO T sling (Herniamesh) is an effective and well tolerated procedure for the treatment of type II urinary stress incontinence and prevents urethral erosion and urethral instability recurrence.

**FUNDING:** none

**CLINICAL TRIAL REGISTRATION:** This clinical trial has not yet been registered in a public clinical trials registry.

**HUMAN SUBJECTS:** This study was approved by the Ospedale Mauriziano Ethics Committee and followed the Declaration of Helsinki Informed consent was obtained from the patients.