

## TRANSVAGINAL BONE-ANCHORED SLING IN FEMALE STRESS INCONTINENCE : MEDIUM-TERM RESULTS AND COMPLICATIONS

### Aims of Study

It was to evaluate the medium-term results and complications of In-Fast transvaginal bone anchoring sling procedure.

### Methods

In March 2003, we assessed 153 women aged 35 to 82 years (mean 60.6) with documented SUI from urethral hypermobility who underwent pervaginal bone anchoring sling procedure between April 1997 and December 2000 by the same surgeon, consecutively. All patients were evaluated taking into account their medical history, physical examination, 1-hour pad test, multichannels urodynamic measurement, abdominal leak point pressure, translabial ultrasonography to assess bladder neck and urethra hypermobility. All patients were free from neurological diseases and peripheral neuropathies. In 6 patients it was documented an hyperactive bladder. A total of 42 (27.4%) patients had previous hysterectomy and 17 (11%) had anterior and posterior vaginal repair and colposacropexy. Moreover 23 (15%) patients had previously one or two failed incontinence surgeries. SUI was due to defect of anatomic support alone in 147 cases (96%) and associated to hyperactive bladder in 6 (4%). The subjective assessment of urine leakage was classified, following the Stamey incontinence score. The severity of pelvic relaxation during both resting and straining was classified in three grades, according to modified criteria from Beecham and Baden. The Stamey's score was grade 1 in 7 (4.6%) patients; grade 2 in 136 (88.9%) patients and grade 3 in 10 (6.5%) patients. The surgical technique has been previously described (1). The sling material used was Dacron in 111 (72.5%) patients, autologous fascia lata or fascia recti in 23 (15%), polypropylene mesh in 16 (10.4%) and dried cadaveric fascia in 3 (2%).

Postoperative follow-up included an initial visit 30 days after surgery and further visits at 3, 6, 12 months and every year for 5 years. During the visit, patients underwent physical examination and translabial ultrasonography and filled in the self-assessment questionnaire, in accordance with the report by Korman in 1994. After the questionnaire and the physical examination were completed, the patients were stratified into two main groups: (a) cured, perfectly dry patients and patients with minimal and occasional leakage; (b) failed, patients improved but with persistent minimal leakage, unchanged or worse.

### Results

A total of 149 (97.4%) patients agreed to complete the patient survey, whereas 4, who had a follow-up of 1, 2, 3 and 27 months documented in the medical records, failed to complete survey. The first 3 patients underwent sling removal whereas the fourth one was lost at this survey. However all patients were dry at the last evaluation. The follow-up ranged from 1 to 62 months (mean 39.6± SD 15.5). The follow-ups of less than 24 months were due to the dropout of patients who underwent sling removal because of rejection. A total of 67 (43.8%) patients underwent In-Fast sling procedure alone, whereas 86 (56.2%) underwent In-Fast in conjunction with simultaneous vaginal surgery (anterior repair in 39 cases, posterior repair in 4 cases, anterior and posterior repair in 23 cases, vaginal hysterectomy and anterior and posterior repair in 14 cases, vaginal hysterectomy and anterior repair in 6 cases). Intraoperative and postoperative complications were: hematoma of Retzius space in 4 patients, bleeding through the vaginal approach in 2 cases, cutting of the prolene suture at the knot in another case.

The main late complication was vaginal erosion which appeared in 18 patients with synthetic sling (Dacron in 17 cases and Polypropylene mesh in 1 case). In one patient, cleansing and suture of the vaginal erosion enabled a good healing. However, in 17/153 (11%) cases, it was necessary to remove the sling 1 to 48 months after surgery (mean 11.5±13.5 SD). Two other slings have been removed: one for the penetration of the Prolene suture into the bladder neck and the other for the dislocation of one end of the sling and recurrent SUI, respectively 13

and 20 months after implantation. As far the urine leakage is concerned, 96% (147/153) of patients reported no incontinence while incontinence was persistent in 4% (6/153) patients. The late complications of the procedure were: voiding in standing position in 10 cases, urgency in 8 cases, residual voiding urine in 2 cases.

### **Conclusions**

In-Fast procedure allows high cure rate in patients with urinary incontinence due a defect of anatomic support. It eliminates the major drawback of the pubovaginal slings represented by postoperative obstructed voiding due to an excessive stretching of the suspension sutures. The only main complication is represented by the use of the gelatin-coated dacron sling that causes vaginal erosion necessitating in most cases the sling removal.

### **References**

1)Transvaginal bone-anchored synthetic sling for the treatment of stress urinary incontinence: an outcomes analysis. Urology. 20: 56: 956, 2000