

## **PROTECTIVE EFFECT OF TRANSVAGINAL SLINGS ON RECURRENT ANTERIOR VAGINAL WALL PROLAPSE AFTER PELVIC RECONSTRUCTIVE SURGERY**

### **Aims of Study**

**Objective:** To examine the independent effect of a transvaginal sling procedure in preventing recurrent anterior vaginal wall prolapse following pelvic reconstructive surgery.

### **Methods**

Women who underwent vaginal reconstructive surgery for significant anterior vaginal wall prolapse (to the hymenal ring or beyond), with or without a concomitant transvaginal sling procedure were examined. The transvaginal sling was placed suburethrally and anchored full length (no suture bridges) to Cooper's ligament bilaterally. The patient population was taken from an ongoing prospective, randomized, controlled trial evaluating the effects of Tutoplast® processed fascia lata to prevent recurrent anterior vaginal wall prolapse. For this preliminary evaluation, the results from subjects enrolled from July 1999 to December 31, 2001 were evaluated. The patients were evaluated by the Pelvic Organ Prolapse Staging System (POP-Q) preoperatively and at 2, 6, 12, and 52 weeks postoperatively. Results from those patients who did and did not receive a transvaginal sling were evaluated using independent t-tests. Multiple logistic regression analysis was used to control for potentially confounding variables.

### **Results**

During the time period studied, 129 women were initially consented for the original study. Two patients were not randomized prior to performing the procedure and one patient was found not to meet the inclusion criteria for study participation, leaving 126 patients' results eligible for analysis. 75 women (59.5%) underwent concomitant transvaginal sling for genuine stress incontinence (GSI), 24 women (19.1%) had an alternate procedure for GSI, and 27 women (21.4%) had no concomitant GSI procedure. Patients who underwent transvaginal sling procedures were older ( $p=0.03$ ), and were more likely to be undergoing concomitant anterior colporrhaphy ( $p=0.03$ ) and sacrospinous vaginal vault suspension ( $p=0.05$ ). For the 2-week postoperative visit, 114 patients (90.5%) returned for evaluation. At 6 weeks, 119 patients (94.4%) returned for evaluation. At 12 weeks, 116 patients (92.1%) returned for evaluation. For those eligible for one-year follow-up, 67 of 84 patients (79.8%) have returned for evaluation. A transvaginal sling was found to be highly protective against Stage II or greater recurrent anterior vaginal wall prolapse ( $p<0.001$ ). This effect was seen as early as 6 weeks postoperatively and remained significant through the 1-year follow-up. At 12 weeks, 16/49 (32.7%) patients without a transvaginal sling vs. 2/67 (3.0%) with a transvaginal sling had developed recurrent anterior vaginal wall prolapse of Stage II or greater. At 1-year follow-up, 14/29 (48.3%) patients without a transvaginal sling vs. 1/38 (2.6%) with a transvaginal sling had Stage II or greater recurrent prolapse. Logistic regression analysis was performed to control for the effects of age, concomitant anterior colporrhaphy or sacrospinous vaginal vault suspension between the sling vs. no-sling groups. These variables had no association with prolapse outcome, and the transvaginal sling continued to show a highly protective effect ( $p=0.002$ ).

### **Conclusion**

Transvaginal sling procedures appear to significantly reduce the risk of recurrent anterior vaginal wall prolapse from over 30% to less than 3%. It should be strongly considered as a concomitant procedure during anterior vaginal wall reconstruction, especially when surgical correction for genuine stress incontinence is planned.