

## **PUBOVAGINAL SLING USING THE PORCINE SMALL INTESTINE SUBMUCOSA (SIS): A NEW MINIMALLY INVASIVE APPROACH FOR COMPLEX STRESS URINARY INCONTINENCE.**

### **Synopsis of Video**

This videotape shows the implant of a new biomaterial sling derived from porcine small intestine submucosa (SIS). Biological based materials has been preferred over the synthetic ones based upon the concern about an increased incidence of infection or urethral erosion induced by synthetic materials. On the other hand synthetic materials allow for performing a pubovaginal sling with minimal dissection, simplifying the surgery and reducing operative time and hospital stay. The SIS biomaterial used here is a fully biocompatible material consisted of a natural matrix of collagen and other tissue components which provide the strength and flexibility important to an effective sling device. It contains growth factors that can improve the host tissue healing and remodeling process around it. Experimental data showed that this sling is replaced by autologous connective tissue after 3 months, that will keep the urethrovesical junction in the proper position. The graft is offered as a 2 per 10 cm multi-layer strip of 4 mm thickness. It is packaged sterilized and lyophilized. Before the procedure, it has to be kept immersed in an gentamicin solution for at least 10 minutes to rehydrate. Then, the graft is folded inward approximately 1 cm and four 00 polypropilene sutures are placed in each corner. Under spinal anaesthesia, an inverted U shaped incision was made in anterior vaginal wall. A median longitudinal incision was preferred if there was some grade cystocele to be corrected at the same procedure. The pubocervical fascia was dissected, the endopelvic fascia was bilaterally perforated and the retropubic area was reached. Digitally dissection was carried out, until the inner surface of the pubic arch was cleared of all soft tissues. SIS was fixed to proximal urethra and bladder neck with polyglactin sutures. The threads previously applied were bilaterally transposed through a small suprapubic incision, using an endoscopic suspension needle. Cystoscopy is performed to rule out bladder lesions. The vaginal wall was closed in the usual manner and the threads were tied to each other without any tension. An urethral catheter was left for 48 hours and all patients received antibiotic prophylaxy for the same period.

This sling associates the advantages of biological materials with those of the synthetic ones, producing 93% of cure in the first 30 patients treated and may be an attractive alternative in complex cases of stress urinary incontinence.