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Title

THE TRANSVAGINAL COOPER'S LIGAMENT SLING A NEW MINIMALLY INVASIVE SURGERY

Aims of Study An outcomes study was performed at two centers to describe the safety and efficacy of a minimally invasive, transvaginal, cadaveric fascial suburethral sling attached to Cooper's ligament, using a novel transvaginal push and catch suturing device (Capio CL*)

Methods Twenty women underwent a transvaginal fascial patch sling while 28 women underwent a full fascial sling transvaginally, anchored to Cooper's ligament The Capio CL® device was used to anchor a monofilament suture to Cooper's ligament bilaterally. For the fascial patch sling, a 2cm x 8cm piece of cadaveric fascia was used The sutures that were anchored into Cooper's ligament were brought through the edges of the patch and tied. For the full fascial sling, a tape measure was used to determine the length of sling material required from Cooper's ligament on one side to the other. The suture was brought through the edges of the sling that was cut to the required length, airplane folded, and then tied directly to Cooper's ligament. In both cases, when tied, the sling is loosely approximated to the posterior urethra. Subjective outcomes were assessed by interview and visual analog scales. Objective outcomes were assessed by a standing stress test at 250ml, and subtracted cystometry. Data for both techniques were comparable, and are analysed together.

Results The mean follow up for the 48 women was 6 (3 5-10) months. Forty-one (85 4%) were cured of their stress incontinence. Thirty-eight (79%) had intrinsic sphincteric deficiency (ISD) preoperatively, and all 7 failed patients had ISD without urethral hypermobility postoperatively. Twenty of 31 women (65%) resolved their preoperative urge incontinence and 3 of 17 (18%) had de novo detrusor instability. The mean time to normal voiding postoperatively was 9.1 (1-70) days. Three women (6%) had persistent elevated residuals (50-200ml), and one had a hematoma requiring drainage.

<u>Conclusions</u> The transvaginal Cooper's ligament sling is a safe and effective, minimally invasive method for treating genuine stress incontinence with, or without, ISD. More follow-up is necessary to evaluate the long-term efficacy of this procedure.