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Title (type in CAPITAL LETTERS): **VAGINAL WALL SUBURETHRAL SLING WITH BONE ANCHORS**

AIMS OF STUDY: The vaginal wall sling has been reported to be comparable to fascial or synthetic slings for the treatment of intrinsic sphincter deficiency (ISD), with subjective cure/almost cure rates of 81% at three months and 70% at 26 months (1). In that study, the sling was sutured anteriorly to the rectus fascia. Suprapubic bone anchors have been postulated to provide a more stable anterior point of fixation, theoretically leading to improved outcomes (2). Thus, in an attempt to improve our cure rates, we modified the vaginal wall sling by using bone anchors to suture the sling to the anterior pubic tubercles. This study was designed to evaluate the safety and success rate of this modification.

METHODS: We performed a vaginal wall sling with bone anchor fixation to the pubic symphysis on 59 consecutive women with ISD, urethral hypermobility, and underactive detrusor. Subjects had an average age of 68 years, average parity 3.7 births and average weight 72.7 kg. Preoperative evaluation included history and physical examination, cotton swab testing, dynamic urethrocystoscopy, and multichannel urodynamic testing. Outcome variables included straining cotton swab angle, catheterization time, and subjective success. 11 subjects had repeat urodynamic testing.

RESULTS: 42 subjects (71%) had detrusor instability (DI) preoperatively. 55 subjects (93%) had concomitant pelvic surgery at the time of sling placement. There were no abdominal or vaginal wound disruptions or other complications from the bone anchors. Average time of assisted bladder drainage (suprapubic or intermittent self-catheterization) was 20 days (range 3-70 days). No subject required permanent catheterization. Average straining cotton swab angle decreased from 52o to 8 o. Urge incontinence resolved postoperatively in 67% of subjects and occurred de novo in 18%. 11 subjects, all with postoperative incontinence, had repeat urodynamic testing. 73% had persistent DI, 9% de novo DI, and 9% persistent ISD. Three months after surgery, 83% of subjects had no stress incontinence. At an average follow-up of 10 months (range 2-28), 78% of subjects reported complete or almost complete cure of stress incontinence. An additional 12% were improved and 10% were complete failures. All failures occurred within three months after surgery.

CONCLUSIONS: The vaginal wall sling with bone anchors is a safe and effective treatment for ISD. There were no complications from the anchors and no abdominal wound disruptions. Even in subjects with underactive detrusor, longterm postoperative urinary retention was rare. Success rates were comparable to but no better than those of our previous vaginal wall sling study. It cannot be concluded that the use of bone anchors improves the success rate of the vaginal wall sling.

1. J Urol 1997; 157(4S):459.
2. J Endourol 1996; 10:221.