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Abstract Reproduction Form B-1

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Title (type in
CAPITAL
LETTERS)**A SEVEN-STEP PUBOVAGINAL (RECTUS FASCIAL) SLING
FOR GENUINE STRESS INCONTINENCE
- PRELIMINARY REPORT.****AIMS OF STUDY:**

Sling procedures have enjoyed a resurgence in popularity due to their efficacy where genuine stress incontinence (GSI) is more severe or the anatomical circumstances are difficult due to previous surgery or intercurrent prolapse. Tensioning in slings is critical with small variations from optimum tension leading to either persistent incontinence or chronic voiding difficulties. The latter often gives disabling frequency, urgency, stranguria and urge incontinence.

The aims of the study are to describe a pubovaginal sling technique using rectus fascia and 7 reproducible steps. Reproducible tensioning is incorporated into step 7. The results for post-operative recovery of voiding and short term (6-week) success for continence are assessed for the first 64 women undergoing this technique. Six month results will be available August 1999.

METHODS:

Sixty-four women, mean age 59 (Range: 32-83), mean number of previous continence procedures 0.8 per patient, diagnosed as having GSI of at least moderate severity after urogynaecological assessment including urodynamics were recruited for the study. All had bladder neck hypermobility as determined by transvaginal ultrasound though no separation was made on the basis of urethral function. Twenty-one women (33%) had associated detrusor instability. The average number of accompanying procedures was 1.2 per patient with 25 women (39%) undergoing hysterectomy and 32 (50%) having one or more vaginal repairs. Each underwent the following sling procedure.

STEP 1: Inverted "U" incision in anterior vaginal wall and creation of vaginal mucosal flap. Lateral urethrovaginal space is created to **but not through** endopelvic fascia.

STEP 2: Via a lower transverse abdominal incision around 1 finger's breadth above the superior aspect of pubis, a rectangular section of rectus sheath around 5-6cm x 2cm (vertical axis), is harvested. The rectus sheath is then closed.

STEP 3: Diathermy dissection through **fat layer only** of inferior margin of same wound exposes the antero-superior aspects (space) of the pubis from midline to 3cm either side.

STEP 4: Rectus sheath is cleared of fat and debris and fashioned to around 5x2cm. An 0 (study patients) or 1 (current use-BTH) prolene suture, (0 Ethibond -RR) is inserted in a spiral fashion (3 bites) at each lateral 2cm margin. Final gap between suture lines is around 4.5cm.

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STEP 5: Nottingham needles (Femcare) are inserted from the antero-superior pubic wound up to 3cm lateral to midline, down behind pubis to lateral urethrovaginal space. Sutures attached to the rectus fascial graft are retrieved ipsilaterally. Cystoscopy is performed to eliminate any bladder perforation.

STEP 6: Graft is laid flat and fixed by 4-5 sutures (2 proximally at bladder neck, 2-3 distally) to pubovaginal fascia. Each side of mucosal flap is closed. A vaginal pack is inserted overnight.

STEP 7: A single arm of each suture is fixed ipsilaterally in spiral fashion (2 bites) to the strong muscle and ligament overlying antero-superior aspect of pubis up to 3cm from midline. Each suture pair is tied ipsilaterally and firmly over the distal interphalangeal joint of the assistant's index finger. Suture ends are cut around 6cm long and stored in the antero-superior pubic space for possible later retensioning. After wound closure, a suprapubic catheter is inserted. Antibiotic cover (usually a cephalosporin) is given intraoperatively and continued at least until the removal of the suprapubic catheter.

RESULTS:**(a) Intraoperative:**

The additional operating time for the sling averaged 70 minutes. Vaginal examination following surgery confirmed a stabilized bladder neck, elongated urethra and good urethrovaginal support with little or no anterior vaginal wall elevation.

(b) Early postoperative:

Trial of voiding was commenced on the 3rd postoperative morning with success deemed as 3 residuals under 100mls for voids over 150mls. Median length of the "trial of void" was 2 days (mean 3.2 days) with only 3 patients taking longer than 7 days (8,8,45 days). Two patients had wound infections; five patients had UTI's; one patient required ligation of a superficial wound haemorrhage 12 hours postop whilst one patient died at 6 weeks postop from a stroke.

(c) Early Follow-up (6-8 weeks): n=63

Sixty (95%) women were symptomatically and objectively (no stress leakage with closed and immobile bladder neck on ultrasound) dry from the stress incontinence viewpoint at early follow-up. Two patients were improved with one failure. One of those improved had severe bronchitis in the 2nd postop week requiring the successful replacement of one broken suture. Mean residual at followup was 9.9ml (0-125ml). No patient was subject to catheterisation at this point. Vaginal anatomy was physiological with no undue distortion or tension.

(d) Six Month follow-up: Available for August 1999.**CONCLUSIONS:**

The above pubovaginal (rectus fascial) technique employs seven reproducible steps with consistent tensioning. Features experienced so far include very satisfactory early results for cure of stress incontinence and a low incidence of postoperative voiding difficulties with no long term catheterisation. It combines favourably with any vaginal prolapse surgery without undue tension and distortion of the vagina and with low patient morbidity. Abdominal or vaginal scarring offers no significant impairment to performing this procedure.