

## Original study

# Experimental Study No. 9: Double incontinence, urinary and fecal, cured by surgical reinforcement of the pubourethral ligaments

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**Abstract:** AIM. To test a previous observation that patients with double incontinence, stress urinary incontinence and fecal incontinence, may both be cured with a midurethral sling. METHODS. A prospective study. Between September 1999 and February 2007, using the IVS tunneller (Tyco Norwalk CT), the author performed 647 midurethral sling operations in patients with genuine stress incontinence (GSI) (n = 343), mixed stress and urge incontinence (n = 242), and double incontinence, stress and fecal (n = 62). Mean age of the patients was 63 years (range 36-86), and mean parity 3 (range 1-6). Transperineal scanning (n = 575) and urodynamics (n = 509) were performed in the majority of patients. Inclusion criteria: all patients with GSI, mixed and double incontinence. Exclusion criterion: external anal sphincter damage. RESULTS. Post-operative assessment was at 6 weeks, 6 months, then 12 months. GSI (n = 343); Mixed Incontinence (n = 242); fecal incontinence (n = 62). Overall cure rate for stress incontinence was 91%, for the urge component of mixed incontinence 74%, and for the fecal component of double incontinence 92%. Complications included bladder perforation 0.1%, voiding difficulty 4%, haematoma 1.7%, neourgency 3.4%, and tape erosion 1.5%. CONCLUSION. A competent pubourethral ligament appears to be an important component of the fecal continence mechanism, at least as concerns patients with double incontinence, who have no obvious external anal sphincter damage.

**Key words:** Fecal Incontinence; Stress Incontinence; Pubourethral ligament; Midurethral sling; Integral Theory.

## INTRODUCTION

I commenced the "tension-free" midurethral sling operation in 1999, using the Tyco IVS instrument. The background to this study was a previous observation of cure whereby patients with double incontinence, stress and fecal, may both be cured with a midurethral sling.<sup>1</sup> Though the main thrust of my work concerned patients with genuine stress incontinence (GSI) or mixed stress and urge incontinence, I kept specific records of any fecal incontinence (FI) symptoms also.

## METHODS

Inclusion criteria were a history of solid or liquid fecal incontinence which during episodes, occurred at least several times a week. The only exclusion criterion was a torn or incompetent external anal sphincter, as diagnosed by rectal examination.

At the 1st visit, all patients had a structured assessment including a self-administered structured questionnaire, vaginal examination, incontinence diary, transperineal ultrasound (n = 575), urodynamics (n = 509), and cough stress pad test which comprised 10 coughs and 10 star jumps, administered with a full bladder. No specific tests were performed for fecal incontinence.

An IVS polypropylene tape was inserted via a retropubic approach in the position of the pubourethral ligaments (PUL) (Fig. 1) using the IVS tunneller (Tyco, Norwalk CT, USA) and the prescribed technique<sup>1</sup> ensuring the tape was closely apposed to the urethra, and tightening the suburethral vaginal hammock.

## RESULTS

Mean age of the patients was 63 years (range 36-86), and mean parity 3 (range 1-6). Post-operative assessment was at 6 weeks,

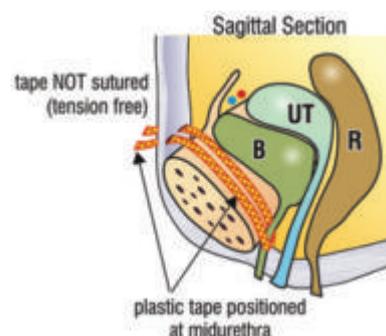


Fig. 1. – 'Tension-free' midurethral tape. A polypropylene tape is positioned exactly at midurethra. This creates a collagenous reaction which re-inforces a lax pubourethral ligament.

TABLE 1. – Results and complications.

IVS Midurethral Sling (n-647)	IVS Midurethral Sling Complications
GSI (n = 343)	Bladder perforation (0.1%)
Cured (91%)	Post-op voiding difficulty (4%)
Cured or improved (95%)	Haematoma (1.7%)
Mixed Incontinence (n = 242)	Neourgency (3.4%)
Urge Cured 74%	Tape erosion/rejection (1.5%)
Urge Cured or improved (81%)	Post-op UTI (6.6%)
Fecal Incontinence (n = 62)	Nerve, bowel injuries (0%)
Improved (92%)	Wound infection (0%)
Patient satisfaction (all operations) (92%)	

6 months, then 12 months. The results on operations performed between Sept 1999 to Feb 2007 are summarized in Table 1: GSI (n = 343); Mixed Incontinence (n = 242); fecal incontinence (n = 62). Overall cure rate for stress incontinence was 91%, for the urge component of mixed incontinence 74%, and for the fecal component of double incontinence 92%. Complications included bladder perforation 0.1%, voiding difficulty 4%, haematoma 1.7%, neourgency 3.4%, and tape erosion 1.5%.

## DISCUSSION

This was a clinical observational study comprising 62 patients. The cure rate, > 90%, for both SI and fecal incontinence was similar to that reported previously.<sup>1</sup> It is well established that a competent pubourethral ligament is important for the control of urinary stress incontinence.<sup>2</sup> This study confirms that a competent pubourethral ligament also appears to be an important component of the fecal continence mechanism, at least as concerns patients with double incontinence, stress and fecal, who have no obvious external anal sphincter damage.

## REFERENCE

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