

PARAURETHRAL SUSPENSION OF BLADDER NECK FOR FEMALE STRESS INCONTINENCE

S Y Chew
K T Foo

SYNOPSIS

The aim of this paper is to assess the effectiveness of paraurethral suspension for the treatment of Grade II stress incontinence in females.

Profene was used to stitch the paraurethral tissue and vagina then tied suprapubically to elevate the bladder neck. Cystoscopy was done to ensure that the suture was placed accurately at the bladder neck region and that there was no inadvertent puncture of the bladder.

25 cases of Grade II stress incontinence and 2 cases of Grade III stress incontinence were thus treated. The follow up was from 3 to 30 months. 22 were cured, 3 improved and 2 failed.

INTRODUCTION

Stress incontinence is common in women and when severe is a social embarrassment.

The anatomical cause for the disorder has been established to be the resultant loss of the urethrovesical angle (1,2). Many operative procedures (3-11) have been devised to restore this angle by elevation of the bladder neck behind the pubic symphysis.

A more recent procedure which has gained popularity abroad is the various modifications of paraurethral suspension (3-10), first described by Pereya (8).

We have employed this method for the treatment of Grade II and Grade III stress incontinence in the past 2½ years.

According to Stamey (4), stress incontinence may be divided into 3 grades:-

- Grade I has leakage of urine on severe stress ie, with coughing, laughing or sneezing
- Grade II has leakage on minimal stress eg, walking, running
- Grade III has total incontinence

The aim of this paper is to review our results and to assess the effectiveness and advantages of this method.

"A" Unit
Department of Obstetrics & Gynaecology
Kandang Kerbau Hospital
Hampshire Road
Singapore 0821

S Y Chew, MBBS (HK), FRCOG
Consultant

University Department of Surgery
Singapore General Hospital
Outram Road
Singapore 0316

K T Foo, MBBS, FRCS (Ed)
Associate Professor

MATERIALS AND METHODS

From March 1984 to October 1986 a total of 27 cases of stress incontinence were operated on, both at the Government "A" Unit, KKH and at the University Department of Surgery, SGH using this method of paraurethral suspension.

Their ages ranged from 35–67 years. Their body weight ranged from 51 kg to 100.6 kg.

All the patients had demonstrable stress incontinence on examination. They dare not go out of their home without the added protection of sanitary pads.

A cases had previous operation for stress incontinence, 7 with Kelly's (9) stitch plication at the bladder neck, one had Marshall-Marchetti (10) operation.

Operative Procedure

Out of 27 cases, 26 were operated under general anaesthesia and one was done under epidural anaesthesia because of ischaemic heart disease.

The patient is put in the lithotomy position. An inverted U-incision is made over the anterior vaginal wall. The retropubic space is entered by sharp and blunt dissection.

Prolene suture is placed in a helical fashion through the endopelvic fascia and deep anterior vaginal wall at the level of the bladder neck.

A transverse abdominal incision about 3 cm long is made in the suprapubic region down to the rectus sheath. A long needle is passed under finger tip guidance from the suprapubic region down to the vagina. The prolene suture is then threaded into the eye of the needle and drawn upward. This is done on both sides of the urethra. Cystoscopy is then performed for 2 reasons:-

1. To ensure that the prolene sutures have not inadvertently entered the bladder.
2. To see whether the sutures are correctly placed at the bladder neck. If so the upward movement and closure of the bladder neck can be visualised via the cystoscope when the sutures are pulled up. The sutures are then tied over the rectus sheath.

RESULTS

It is easy to puncture the bladder inadvertently in spite of using finger guidance.

6 patients were found to have this on cystoscopy. The sutures were removed and replaced more laterally.

In 2 patients who had previous operations on the bladder neck and one with previous irradiation, the bladder was accidentally cut. The bladders were subsequently repaired and recovery was uneventful.

Post-operatively the catheter was removed from the 5th to 7th day. All patients were able to void except one who required intermittent self catheterisation for about a month. There was no post-operative suprapubic infection. Two had significant urinary tract infection. Three patients had frequency of micturition but they improved subsequently.

Of the 25 cases with Grade II stress incontinence, on follow up from 3 to 30 months, 22 were cured of the stress incontinence. Three had occasional stress on severe straining. Two recent patients with Grade III stress failed within a month of surgery. One had a Studdiford sling done (previous Ca Cx Ib) and improved.

DISCUSSION

Cystoscopy is essential not only to ensure correct

placement of sutures at the bladder neck but also to check any inadvertent puncture of the bladder with the prolene. If undetected, bladder stones may result. To avoid it the bladder must be empty and the ligature carrier should be put horizontally until it reaches the pubic symphysis and then angled laterally behind the bone into the vagina.

In those with previous bladder neck operations it is easy to injure the bladder. Care must be taken during dissection to avoid this.

Postoperative retention was not a problem except in one. She improved with clean intermittent self catheterisation for a month. This method has been found to be satisfactory in treating postoperative retention by other workers (11).

There was one case of suprapubic infection of the wound. Infection is possible because of retropubic dissection and infection from the vagina. The patient was put on prophylactic bactrim and flagyl pre and post operatively.

Initially we performed this procedure on cases with only Grade II stress incontinence. Our results of the first 12 were good, 11 achieving continence and one with occasional stress incontinence on lifting heavy objects (ie improved). Encouraged by this we extended this procedure to patients with Grade III incontinence. Both Grade III cases failed within 10 to 14 days of surgery. One had history of pelvic irradiation for carcinoma of cervix Stage Ib, 2 years ago. Stress incontinence resulted after radiotherapy. On vaginal examination she was found to have a moderate cystocele with demonstrable stress incontinence and leakage of urine at rest. Bonney's test was positive. The anterior and posterior vaginal wall were adherent and the cervix could not be visualised. At operation the tissues were found to be friable and thin.

The second patient previously had Pacey operation and correction of stress incontinence was reattempted.

Both had poor tissue for stitching. The most likely cause of failure is that the suspending suture had cut through the tissue at the vaginal aspect. Uro-dynamic studies show no detrusor instability.

In Stamey's series (5) the failures were early occurring within 3 months.

In Fietscher's series (6) the failure occurred within 3 months. Two cases failed at 12–14 months. His failures were due to technical error or spontaneous rupture of the nylon suspension.

CONCLUSION

Perhaps no single method should be advocated for the treatment of stress incontinence in the female.

For the mild Grade I stress incontinence the Kelly plication stitch at the bladder neck should suffice to correct the disability.

Paraurethral suspension method as described in this series is effective in treating patients with Grade II stress incontinence. Its main advantage is that the suture can be placed accurately at the bladder neck region under vision. Besides any cystocele or rectocele can be dealt with at the same time. The success rate in this series is 82% cure and 7% improvement.

However for Grade III stress incontinence the added use of dacron buttress may be more effective for ensuring success in curing stress incontinence or else a "sling" operation may be preferable.

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