Original Article

Colposuspension for Urinary Stress Incontinence in Postmenopausal Patients

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Abstract: Eighty-seven postmenopausal patients had a colposuspension for urinary stress incontinence. A significant postoperative reduction (p<0.001) of symptoms of frequency, nocturia, urgency and urge incontinence was obtained. The cure rate for urinary incontinence was 77%. Twenty patients were found to be wet postoperatively, 8 due to stress incontinence and 12 due to detrusor instability, 9 of whom had detrusor instability preoperatively.

No differences were found pre- and postoperatively in the cystometric and uroflowmetric values or in the urethral pressure profile measurements. The pressure transmission ratios were significantly improved postoperatively.

During operation and postoperatively, minor complications occurred in this group of patients. In 5 patients blood transfusion was needed. Urinary tract infection was diagnosed in 21 patients, wound infections in 4 patients and enterocele in 5 patients.

Colposuspension for urinary stress incontinence in postmenopausal patients is a safe procedure with a reasonable cure rate indicating that a surgical approach should be adopted in such patients.

Keywords: Colposuspension; Incontinence; Menopause

Introduction

Urethral sphincter incontinence is usually treated by surgery. The aim of surgery is to elevate the bladder neck so that a rise in intraabdominal pressure is transmitted to the proximal urethra. Burch colposuspension is probably the first choice among the retropubic procedures as it has a high cure rate and also corrects anterior vaginal wall prolapse [1]. Menopause, among others, is considered as a factor that may jeopardize the cure rate following surgery. Recently [2] we found that postmenopausal patients had lower cure rates following colposuspension compared to a premenopausal group of patients. Although direct association between the onset of incontinence and the menopause is suggested since a large percentage of women become incontinent after the menopause, the proportion of women who are treated surgically is less among elderly than younger populations.

The purpose of this study was to evaluate our results following colposuspension for urinary stress incontinence in postmenopausal patients.

Material and Methods

During 1982–1989, 243 patients underwent a colposuspension for urinary stress incontinence in our department. Of those, 87 patients (36%) were postmenopausal and were included in the study. This study includes the results of 53 postmenopausal patients published previously [2].

Preoperatively, all subjects had a full history taken and underwent examination of their gynecologic, urologic and neurologic systems. The urodynamic investi-
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gation included cystometry, uroflowmetry and urethral pressure profiles. Cystometry and uroflowmetry were performed using the Urinary Investigation System 5000 (Lectromed, Jersey, UK). Measurements were made with the patients in the supine and standing positions. Urethral pressure profiles were obtained with the dual Gaeltec microtransducer catheter. These tests have been described elsewhere [3]. The catheter was withdrawn at a constant rate, and simultaneous constant records were made from the terminal transducer (urethral pressure) and the proximal transducer (vesical pressure). The urethral closure pressure was calculated by electronic subtraction. Repeating the catheter withdrawal, we asked the patient to give a series of coughs and obtained a stress profile from which pressure transmission ratios [4] were calculated at 4 equidistant points.

In those patients who were on hormonal substitution, treatment was discontinued 1 month prior to surgery.

The operation performed for correcting the urinary stress incontinence was a modified Burch colposuspension [5]. Postoperatively, the bladder was drained via a suprapubic catheter which was removed when the residual volume was less than 100 ml.

These investigations were repeated on all patients 6 months postoperatively. Thereafter follow-up continued clinically. The methods, definition, and units conform to the standards proposed by the International Continence Society [6]. The statistical method used was McNemar's paired Chi square test.

**Results**

The characteristics of the 87 postmenopausal patients who underwent surgery are summarized in Table 1. Sixteen patients had previous incontinence surgery (18.3%). Of those, 10 had had vaginal hysterectomy and a Kelley's suburethral plication, 5 patients had a Marshall-Marchetti operation and a Stamey procedure was done in 1 patient.

Following the urodynamic work-up, 72 out of the 87 patients (82.6%) were diagnosed as having genuine stress incontinence, while 15 patients (17.4%) were diagnosed as combined urinary stress incontinence and detrusor instability. The operative procedure performed was a colposuspension in 52 patients (59.7%) and a colposuspension with hysterectomy was performed in 35 patients for various gynecological indications. An additional 12 patients had had previous hysterectomy performed.

The mean ± SD for follow-up was 3.8 ± 1.7 years. Clinically (Table 2), there was a significant reduction (p<0.001) in symptoms of frequency, diurnal and nocturnal urge incontinence and urgency (p<0.01). The failure rate was 23% with 8 patients having postoperative urinary stress incontinence (9.2%) and 12 patients with detrusor instability (13.8%). Nine of these were diagnosed prior to the operation as having com-

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**Table 1. Age, parity, duration of symptoms and previous operations for urinary incontinence in 87 postmenopausal patients**

<table>
<thead>
<tr>
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<th>Mean ± SD</th>
<th>Range</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td>57.4 ± 4.2</td>
<td>53-78</td>
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<tr>
<td>Parity</td>
<td>2.7 ± 1.4</td>
<td>1-8</td>
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<tr>
<td>Duration of symptoms (years)</td>
<td>5.5 ± 2.9</td>
<td>2-17</td>
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<tr>
<td>Previous operations for urinary incontinence</td>
<td>16 (18.4%)</td>
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