

## OUTCOME OF ABDOMINAL SACROCOLPOPEXY WITH AND WITHOUT CONCOMITANT BURCH COLPOSUSPENSION: A RETROSPECTIVE STUDY

### Hypothesis / aims of study

Abdominal sacrocolpopexy is a surgical treatment for vaginal vault prolapse. In patients having co-existent urodynamic stress incontinence, this is often combined with Burch colposuspension. On the other hand, Burch colposuspension may predispose the vaginal vault and posterior compartment to subsequent prolapse occurrence. This study aims to report the efficacy and complications of abdominal sacrocolpopexy using polytetrafluoroethylene mesh in a regional hospital. The effect of concomitant Burch colposuspension on the efficacy of the abdominal sacrocolpopexy would also be studied.

### Study design, materials and methods

This is a retrospective chart review of patients who underwent abdominal sacrocolpopexy for vaginal vault prolapse in a regional hospital from February 1999 to September 2005. All patients were assessed using standard prolapse and urinary tract symptoms questionnaires. Pelvic organ prolapse was assessed according to the standardization of the International Continence Society (ICS).<sup>(1)</sup> All patients had preoperative multichannel urodynamic studies with reduction of the prolapse. Abdominal sacrocolpopexy was performed with attachment of the polytetrafluoroethylene mesh to the posterior vaginal wall and vault at one end and to the anterior longitudinal ligament at the first sacral vertebral level at the other end. Concomitant Burch colposuspension was performed for patients having urodynamic stress incontinence. At each postoperative visit, symptoms were reviewed and the prolapse examined according to the ICS system. Objective success for prolapse was defined as no pelvic organ prolapse of more than stage 1. Subjective success was defined as the absence of prolapse sensation after operation. Multichannel urodynamic studies were performed for postoperative assessment after Burch colposuspension. Objective cure was defined as continence at the postoperative urodynamic studies. Subjective cure, improvement and failure were defined as complete dryness during stress, occasional leakage during stress, and unchanged or worsened leakage during stress respectively. The groups with and without concomitant Burch colposuspension were compared using the t test for continuous variables; and the Chi-square test or Fisher's exact test, where appropriate, for categorical variables. A p value of <0.05 was considered statistically significant.

### Results

Thirty patients underwent abdominal sacrocolpopexy. All had symptomatic vaginal vault prolapse of stage 2 or above preoperatively. Concomitant Burch colposuspension was performed in 12 patients (40.0%). Other concomitant operations included bilateral salpingo-oophorectomy (n=4, 13.3%), anterior colporrhaphy (n=1, 3.3%), and posterior colporrhaphy (n=3, 10.0%). The mean age was  $63.4 \pm 10.1$  years (range 34-79 years). Mean parity was  $4.0 \pm 1.7$  (0-7). Mean body mass index (BMI) was  $25.1 \pm 3.8$  kg/m<sup>2</sup> (17.5-34.0 kg/m<sup>2</sup>). Preoperative hormonal therapy and ring pessaries were used in 10 patients (33.3%) and 6 patients (20.0%) respectively. The mean follow-up duration was  $43.6 \pm 22.6$  months (5-83 months). The mean operative time was  $157.9 \pm 50.9$  minutes (80-320 minutes). The mean operative blood loss was  $445.0 \pm 360.9$  ml (100-1500 ml). The mean duration from operation to the removal of urinary catheter was  $5.5 \pm 6.9$  days (1-36 days). The mean hospital stay was  $9.7 \pm 7.7$  days (3-41 days).

The objective success rates were 86.7% for vault prolapse alone and 80.0 % for prolapse in all compartments. The subjective success rate was 80.0%. Re-operation for recurrent prolapse was performed in 3 patients (10.0%). Within the group who underwent concomitant Burch colposuspension (n=12), 10 patients (83.3%) were objectively cured of the incontinence. Ten patients reported subjective cure (83.3%) and two (16.7%) reported subjective improvement.

Complications included major hemorrhage >1.5 L from injury to the presacral vessels (n=1, 3.3%), febrile morbidity (n=1, 3.3%), ileus (n=2, 6.7%), urinary tract infection (n=5, 16.7%), incisional herniae (n=2, 6.7%), and mesh erosion (n=2, 6.7%). Bladder injury, postoperative urinary retention and de novo detrusor overactivity occurred in 2 patients (6.7%), 4 patients (13.3%) and 1 patient (3.3%) respectively; all were in the concomitant Burch colposuspension group.

Subgroup analysis showed no significant difference between the groups with (n=12) and without (n=18) concomitant Burch colposuspension in the mean age, parity, BMI, preoperative use of hormonal therapy and ring pessaries, mean follow-up duration, operating time and blood loss. Significant difference was found between the groups with and without concomitant Burch colposuspension in the mean duration from operation to the removal of urinary catheter ( $10.5 \pm 8.8$  days vs.  $2.4 \pm 2.6$  days, p=0.001) and in the mean duration of hospital stay ( $13.2 \pm 9.9$  days vs.  $7.4 \pm 4.9$  days, p=0.043).

There was no significant difference between the groups with and without concomitant Burch colposuspension in the subjective success rate for prolapse (91.7% vs. 72.2%, p=0.358), objective success rate for vault prolapse alone (91.7% vs. 83.3%, p=0.632) and for prolapse in all compartments (91.7% vs. 72.2%, p=0.358). The rates of re-operation for recurrent prolapse for the two groups were similar (8.3% vs. 11.1%, p=0.804). Postoperative urinary retention occurred more commonly in the group with concomitant Burch colposuspension than in the group without (33.3% vs. 0%, p=0.018). There was no significant difference between the two groups in the other complication rates.

#### Interpretation of results

Abdominal sacrocolpopexy was effective in the correction of vaginal vault prolapse with success rate of at least 80% at a mean follow-up of 43.6 months. Concomitant Burch colposuspension did not seem to affect the efficacy of the abdominal sacrocolpopexy, although it was associated with a longer hospital stay and a higher rate of postoperative urinary retention.

#### Concluding message

Abdominal sacrocolpopexy is an effective surgical treatment for vaginal vault prolapse. Concomitant Burch colposuspension performed for co-existent urodynamic stress incontinence did not seem to have adverse effect on the efficacy of the prolapse surgery in this series. Larger series would be useful to confirm these findings.

#### Reference

(1) Am J Obstet Gynecol 1996; 175:10-17.

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