

The Role of Pre-Operative Urodynamic Testing in Stress Continent Women Undergoing Sacrocolpopexy: The Colpopexy and Urinary Reduction Efforts (CARE) Randomized Surgical Trial

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Introduction and Objective:

To describe results of reduction testing in stress continent women undergoing sacrocolpopexy and to estimate whether stress leakage during urodynamic testing with prolapse reduction predicts postoperative stress incontinence.

Methods:

322 stress-continent women with Stage II-IV prolapse underwent standardized urodynamics. Five prolapse reduction methods were tested, two at each site and both performed for each subject. Clinicians were masked to urodynamic results. At sacrocolpopexy, participants were randomized to Burch colposuspension or no Burch (control). P-values were computed by two-tailed Fisher's exact test or t-test.

Results:

Preoperatively, only 12 of 313 (3.7%) subjects demonstrated urodynamic stress incontinence (USI) *without* prolapse reduction. More women leaked after the 2nd method than after the 1st, 22% versus 16% ($p=0.012$). Preoperative detection of USI *with* prolapse reduction at 300 ml was: pessary, 6% (5 of 88); manual, 16% (19 of 122); forceps, 21% (21 of 98); swab, 20% (32 of 158); and speculum, 30% (35 of 118). Women who demonstrated pre-operative USI during prolapse reduction were more likely to report postoperative stress incontinence, regardless of concomitant colposuspension (controls 58% vs. 38% ($p=0.04$) and Burch 32% vs. 21% ($p=0.19$)).

Conclusions:

In stress continent women undergoing sacrocolpopexy, few women demonstrated USI without prolapse reduction. Detection rates of USI with prolapse reduction varied significantly by reduction method. Preoperative USI leakage during reduction testing is associated with a higher risk for postoperative stress incontinence at three months. Future research is warranted in this patient population to evaluate other treatment options to refine predictions and further reduce the risk of postoperative stress incontinence.

Key words:

Occult incontinence; Urodynamics; Prolapse Reduction; Sacrocolpopexy