

Predicting the Outcome of Mid-urethral Tape Surgery for Stress Urinary Incontinence Using Preoperative Urodynamics – A Systematic Review

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Abstract

Urodynamics are currently widely used in most of urogynecology services, mainly as a diagnostic tool routinely preoperatively or for complicated cases. The urodynamic parameters, mainly Valsalva leak point pressure (VLPP) and maximum urethral closure pressure (MUCP), are increasingly researched for the promising value in predicting the outcome of urinary incontinence surgery. Despite the increasing evidence, their predictive role for mid-urethral sling surgery outcome is still unclear. We systematically searched the literature for articles published between January 1990 to January 2014, analysing the value of urodynamic variables in predicting the outcome of mid-urethral sling surgery. We calculated relative risks of failure of surgery for patients with low MUCP and VLPP compared with those with high values. Low preoperative MUCP was associated with higher risk of failure for both transobturator and retropubic techniques (RR 1.83; 95% confidence interval (CI) 1.44-2.33 and RR 1.41; 95% CI 1.17-1.69 respectively). Low preoperative VLPP was predictive as well for higher risk of failure for both transobturator and retropubic routes (RR 1.76; 95% CI 1.37-2.28 and RR 2.01; 95% CI 1.56-2.60 respectively). Concluding, pre-operative MUCP and VLPP could be used as predictors for postoperative outcome after mid-urethral sling surgery for SUI.

Key words: urinary incontinence, Valsalva leak point pressure, maximum urethral closure pressure, mid-urethral tape

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