

DOES URETHRAL FUNCTION AFFECT URODYNAMIC VOIDING PARAMETERS IN WOMEN WITH PROLAPSE?

Elizabeth R. Mueller, Departments of Urology and Obstetrics and Gynecology, Loyola University Medical Center, Maywood, Illinois; for the Pelvic Floor Disorders Network

Introduction and Objective: We hypothesized that women with pelvic organ prolapse (POP) and overt stress urinary incontinence (SUI) would demonstrate less obstruction and retention because of the “release valve” effect of a less competent urethra. We conducted a prospective supplementary study to the Colpopexy And Urinary Reduction Efforts (CARE) study. We compared voiding parameters and symptoms in 3 groups of women with POP: 1) women with no symptoms of SUI and no urodynamic stress incontinence (USI) during prolapse reduction, 2) women with no SUI symptoms but evidence of USI on reduction testing (occult USI) and 3) women with SUI symptoms (overt SUI).

Methods: We enrolled 225 women with stage II-IV POP. The two groups randomly selected from the CARE population differed only in the absence (N=67) or presence (N=84) of USI during prolapse reduction. Group 3 consisted of 74 women who were similar to CARE subjects except for reporting subjective SUI. Subjects completed the Pelvic Floor Distress Inventory (PFDI), underwent a standardized Pelvic Organ Prolapse Quantification (POP-Q) examination, and a standardized non-instrumented uroflow (NIF), filling cystometry and pressure-flow studies using the standardized CARE urodynamics (UDS) protocol. We defined obstruction using the Blaivis-Groutz nomogram for women and urinary retention as a post-void residual (PVR) of $\geq 25\%$ of total bladder volume.

Results: The subjects' median age was 61 years with a median parity of 3. Eighty-seven percent of women had stage III or IV POP. Approximately one-third (38%) of the women had prior surgery for POP or urinary incontinence. Demographic variables were similar amongst the three groups except Group 2 (occult SUI) was older than Group 1 ($p=0.02$). The PVR, median peak flow rate, and median detrusor pressure at peak flow across the three groups were similar. Sixty-three percent voided by detrusor contraction alone and 27% voided with detrusor contraction and strain. Voiding mechanism and voiding pattern did not differ by group. Fifty-nine percent of women were found to be “obstructed” and 39% were in “urinary retention”. Rates of obstruction and urinary retention were similar between the 3 groups. While women with overt SUI were more likely to have higher irritative and obstructive symptom subscale scores, neither score differed according to whether urodynamics revealed DO or obstruction, respectively.

Conclusion: Women with POP have significant rates of urodynamic obstruction and retention, independent of their continence status. Further, symptoms of obstruction and retention correlate poorly with urodynamic findings in women with POP.

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