

## ASSOCIATION OF THE MAGNITUDE OF PELVIC ORGAN PROLAPSE AND PRESENCE AND SEVERITY OF SYMPTOMS

### Aims of Study

To determine the relationship between magnitude of pelvic organ prolapse (POP) and the presence and severity of bowel, bladder and vaginal symptoms.

### Methods

One hundred and sixty-two women who were recruited at 2 different medical centers for one of three studies validating the Pelvic Floor Distress Inventory (PFDI) and Pelvic Floor Impact Questionnaire (PFIQ) are the subject of this study.[1] All subjects presented with one or more pelvic floor symptoms. Each underwent a comprehensive urogynecologic evaluation including pelvic examination using the Pelvic Organ Prolapse Quantitation system (POPQ) and completed the PFDI, a validated self-administered condition specific quality of life instrument for women with pelvic floor disorders. The PFDI assesses the presence of a variety of bowel, bladder and pelvic symptoms and the degree of bother caused by these symptoms on a four-point scale from 1 = not at all to 4 = quite a bit. The presence of and degree of bother caused by symptoms was correlated with the extent of anterior, posterior and maximal POP using Spearman's correlation coefficient. The prevalence of each symptom was determined for each 1 cm increment of POP (measured in reference to the hymen) in order to identify any "threshold" where symptoms begin to develop/resolve. Statistical analysis was performed with SAS v. 9.0 (SAS Institute, Cary, NC)

### Results

The mean age of subjects was 53 years (range 22-86). The distribution of POP stage was 20% Stage 0, 25% Stage 1, 23% Stage 2, 26% Stage 3 and 6% Stage 4. Prolapse symptoms such as a sensation of bulging or protrusion, feeling pelvic heaviness or dullness, or visualizing a bulge all correlated weakly to moderately with increasing POP ( $r = .56, .26, \text{ and } .53$  respectively,  $p < .0001$ ). The degree of bother caused by these symptoms also increased significantly with worsening POP ( $p < .0001$ ). There was a dramatic increase in the proportion of patients who noted that they could see or feel a vaginal bulge when the maximum extent of POP extended beyond the hymen (11% when maximum prolapse less than 1 cm above hymen, 41% at hymen and 93% 1 cm or greater beyond hymen). In contrast, the proportion with a sensation of bulging or a feeling of heaviness increased gradually as the maximal extent of POP proceeded from normal support to advanced POP. Neither symptoms of pelvic pressure nor pain correlated with POP severity. The presence of bladder symptoms such as difficulty emptying, incomplete emptying, frequency and urgency did not correlate with the degree of anterior vaginal prolapse, however the degree of bother caused by these symptoms was weakly related to increasing POP ( $r = .19$  to  $.23$ ,  $p < .02$  for each). Three percent of subjects (4/108) whose anterior prolapse was above the hymen complained of splinting to urinate compared with 36% (15/42) of those prolapse protruded 1cm or more beyond the hymen. The proportion of subjects complaining of stress urinary incontinence increased steadily from 31% (18/55) for those with normal anterior support to 100% (13/13) for those with prolapse to the level of the hymen, then suddenly decreased as the prolapse extended 1cm or greater beyond the hymen (41%; 15/37). Fecal incontinence, hard straining and feeling of incomplete emptying did not correlate with severity of posterior vaginal prolapse, however splinting to complete bowel movements did ( $r = .33$ ,  $p < .0001$ ).

### Conclusions

Symptoms such as bulging, heaviness and splinting to urinate or defecate correlate with increasing severity of pelvic organ prolapse, however many bowel or bladder symptoms typically attributed to prolapse do not.

## **References**

1. Psychometric Evaluation of two Comprehensive Condition-Specific Quality of Life Instruments for Women with Pelvic Floor Disorders. *Am J Obstet Gynecol* 2001; 185(6):1388-95.