

ELEVATED POSTVOID RESIDUAL IN WOMEN WITH PELVIC FLOOR DISORDERS: PREVALENCE AND ASSOCIATED RISK FACTORS

Hypothesis / aims of study

To establish the prevalence of and identify the risk factors for elevated post void residual urine volume (PVR) in women seeking care for pelvic floor disorders (urinary incontinence and / or pelvic organ prolapse).

Study design, materials and methods

A retrospective case-control study using a study population of 1399 women with symptoms of pelvic floor disorders (PFD) attending a Female Pelvic Medicine Clinic. All women underwent standardised evaluation including questionnaire, history, physical exam, pelvic exam with quantitative pelvic organ prolapse grade (POP-Q) and PVR via catheter. Elevated PVR was defined as ≥ 100 ml. Prolapse was defined as leading edge at or beyond the hymen on POP-Q. Patient's primary presenting symptoms were obtained from review of standardised intake questionnaire. Cases were matched for age and body mass index (BMI). Chi-square and logistic regression analyses were used to determine crude and adjusted odds ratios (OR) with 95% confidence intervals (CI).

Results

The prevalence of elevated PVR was 10.7% (151/1399) and the mean age was 61.8 years for the elevated PVR group and 58.6 years for the normal PVR group ($p < .05$). Table 1 demonstrates the logistic regression results as an odds ratio (OR) of having an elevated PVR based on a patient's presenting symptomatology and examination findings.

Table 1.	Crude OR (CI)	Adjusted OR (CI)
SUI	0.55(0.33- 0.92)	0.63 (0.43 – 0.92)
Vaginal Bulge	2.19(1.38- 1.48)	NS
Pelvic Pressure	1.79(1.14- 2.86)	NS
Splinting	2.89(1.24- 6.76)	1.80 (1.06 – 3.09)
Prolapse	2.60(1.62- 4.18)	1.96 (1.37- 2.79)

Interpretation of results

- The overall prevalence of elevated PVR is 11% in this patient population.
- The symptoms of vaginal bulge, pelvic pressure and splinting are significantly associated with findings of an elevated PVR on examination.
- Symptoms of SUI are inversely related to incomplete bladder emptying.
- Women with prolapse at or past the hymen are 2-3x more likely to have an elevated PVR.

Concluding message

In a primary care setting, asking women about sensation of vaginal bulge, pelvic pressure, and urinary splinting and evaluating for anterior prolapse beyond the hymen may help guide which women need a complete evaluation including a PVR.