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## THE SYMPTOM OF VOIDING DYSFUNCTION: DOES IT PREDICT AN EMPTYING PHASE DISORDER?

### Aims of Study

Determine the prevalence and predictive values of the symptom of voiding dysfunction in the diagnosis of emptying phase disorder on urodynamic studies (UDS).

### Methods

The charts of 240 consecutive patients were retrospectively reviewed. Patients were all from a referral urogynecologic population and UDS were performed for a variety of reasons. Multi-channel video-UDS were performed on all patients. An initial uroflow, done prior any urethral manipulations, was recorded. Post-void residual (PVR) was obtained by catheterization. Cystometrogram with Xray imaging was carried out, followed by a pressure-flow study. PVR was evaluated by fluoroscopy. Finally, urethral pressure profile were performed. Two sets of uroflow and PVR were thus available from each patient: pre- and post-instrumentation.

Symptomatic screening for voiding dysfunction was performed by eliciting the two symptoms: incomplete emptying or poor/slow stream.

Emptying phase disorder was diagnosed on UDS in the presence of a peak flow rate less than 15 ml/sec (on a total voided volume >150ml) and/or a PVR > 50ml. All other definitions were in accordance to the International Continence Society.

### Results

Of the 240 charts reviewed, 55 had incomplete data, thus resulting in 185 charts for which uroflow and PVR were available both pre and post-instrumentation.

The mean age of the patients was 52.8 year and parity was 2.9. Sixty-three percent demonstrated a cystocele on physical examination (prior to introduction of ICS pelvic organ prolapse quantification—POP-Q [1]), of which 45% had a cystocele either reaching or going beyond the introitus (Stage II or greater, ICS classification). Seventeen percent had had prior bladder neck surgery.

The prevalence of the symptom of voiding dysfunction was 20%. No difference in demographic variables were found between patients with symptoms of voiding dysfunction and those without.

UDS revealed a diagnosis of emptying phase disorder in 36.3% (as defined above), based on their initial (pre-instrumentation) uroflow and PVR. Twenty-three percent had that diagnosis post-instrumentation. Patients with advancing age ( $P < 0.05$ ) and patients who had a prior bladder neck surgery ( $P < 0.02$ , post-instrumentation only) were more likely to have an emptying phase disorder on UDS. Surprisingly, the absence of a cystocele was more commonly associated with a diagnosis of emptying phase disorder.

The positive predictive value of the symptom of voiding dysfunction in detecting emptying phase disorder on UDS were low at 44% and 24% for pre- and post-instrumentation, respectively. The agreement between the symptom and the UDS diagnosis was moderate, with a *Kappa* value at 0.4.

### **Conclusions**

The prevalence of voiding dysfunction on UDS was high in this referral population, at 23-36%.

The symptoms of slow stream and incomplete emptying were poor predictor of a UDS diagnosis of emptying phase disorder.

Patients with advancing age and previous bladder neck surgery were more likely to harbor a voiding dysfunction on UDS. Anterior wall prolapse does not appear to be associated with urodynamically diagnosed emptying phase disorder.

### **References**

1. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. Am J Obstet Gynecol 1996;175:10-7.