

BLADDER OUTLET OBSTRUCTION IN PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS

Hypothesis / aims of study

Painful Bladder Syndrome /Interstitial cystitis (PBS/IC) is the complaint of suprapubic pain related to bladder filling, accompanied by other symptoms such as increased daytime and night-time frequency, in the absence of proven urinary infection or other obvious pathology. It is difficult to diagnose, and even harder to treat. Obstructive symptoms such as slow stream, dribbling, straining to void, and incomplete emptying are often reported by PBS/IC patients. There is little data in the literature on pressure flow urodynamic studies in IC patients or on obstructive voiding. In our patient population we have a significant number of PBS/IC patients who have undergone urodynamic pressure flow study (UDPF) and with recently published pressure flow cut-off values for female bladder outlet obstruction (1) we decided to evaluate this population for the possibility of Bladder Outlet Obstruction (BOO). We suspected that some patients with PBS/IC have an associated measurable bladder outlet obstruction and that those patients with more severe PBS/IC are more likely to have BOO.

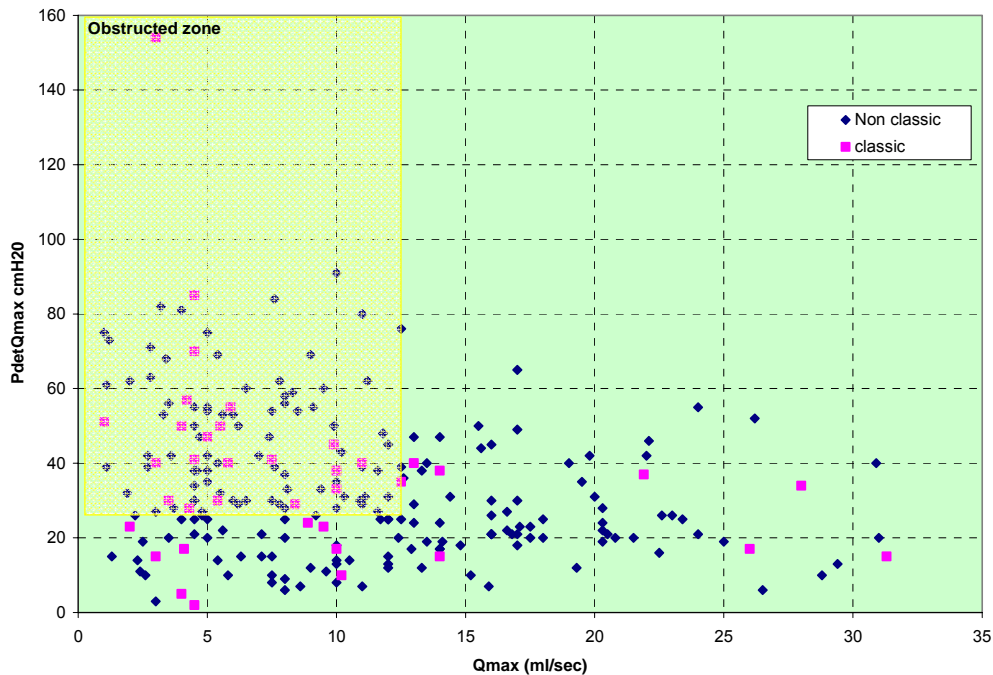
Study design, materials and methods

This is a retrospective chart review of a total of 274 female patients all diagnosed with PBS/IC based on the Interstitial Cystitis Data Base Study Entry Requirements (2) and cystoscopy, from January 1994 to September 2004. Charts were reviewed for Lower Urinary Tract Symptom (LUTS) severity (0-3), severity of PBS/IC on cystoscopy (3), and UDPF studies. Some patients were excluded because not all data were available (18 patients), had a UTI at the time of urodynamics (5 patients). In 20 patients we were unable to evaluate UDPF. UDPF study was done in semi-sitting position with #7 F urodynamic catheters. Urodynamic studies were all read and adjusted manually by the urologist. The cut-off values of Maximum Flow Rate (Qmax) ≤ 12 ml/sec and Detrusor Pressure at Maximum Flow (PdetQmax) ≥ 25 cm H₂O were used to define BOO in these women (1). Cystoscopy was done under general anaesthetic. Bladder was dilated by filling water at 80 cm H₂O for a minute. The correlation of LUTS to cystoscopic severity of PBS/IC and BOO UDPF values was analyzed. Statistical analysis was done using GraphPad Prism software. For group comparison t-test (unpaired) and contingency tables were used. P value of less than 0.05 was considered statistically significant at 95% confidence interval.

Results

There were 231 women with a mean age of 52 who were included in the study. 193 patients presented with non-classical PBS/IC and 38 with classical PBS/IC. There were no significant differences in clinical symptoms of frequency, urgency, nocturia, suprapubic pain when comparing severity of PBS/IC. There was a slightly higher incidence of urge incontinence with classic PBS/IC (P=0.04). Maximum Cystometric Capacity (MCC) and detrusor overactivity on UDPF studies was statistically the same in classic and non classic PBS/IC. Mean residual urine was 77 ml in non classic and 56 ml in classic disease (p=0.0002). Total of 48% women met urodynamic criteria for bladder outlet obstruction, 46% women with non-classic PBS/IC and 55% with classic, but the difference between these two groups did not reach statistical significance (p=0.65). Women with classical PBS/IC had Qmax of 8.8 ml/sec and PdetQmax of 37.4 cm H₂O and with non-classic PBS/IC Qmax 10.9 ml/sec and PdetQmax 33.3 cm H₂O. The only statistical difference was in PdetQmax (0.002)

UDPF Study



Interpretation of results

This is the first report of increased prevalence of bladder outlet obstruction in patients with PBS/IC. Although this is a retrospective review of the patient's UDPF studies and the criteria for BOO in women are still debatable however the study concurs with our clinical observation of voiding difficulties in this group of patients.

Concluding message

Approximately half of the women with PBS/IC have urodynamic evidence of bladder outlet obstruction.

References:

- 1- Refining diagnosis of anatomic female bladder outlet obstruction: comparison of pressure flow study parameters in clinically obstructed women with those of normal controls. *Urology* 64: 675–681, 2004
- 2- The Interstitial Cystitis Data base (ICDB) Study, in Sant MD (Ed.): *Interstitial Cystitis*. New York, Lippincott-Raven (in press).
- 3- Interstitial cystitis: early diagnosis, pathology, and treatment. *Urology*, 12: 381, 1978