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BLADDER PAIN SYNDROME/INTERSTITIAL CYSTITIS IN MALES: CLINICAL PRESENTATION AND CORRELATION BETWEEN SYMPTOMS, CYSTOSCOPIC AND URODYNAMIC FINDINGS.

Hypothesis / aims of study

Bladder Pain Syndrome/Interstitial cystitis (BPS/IC) is a chronic inflammatory condition of the urinary bladder that is predominantly present in females. Recent studies suggest that Bladder Pain Syndrome/Interstitial Cystitis BPS/IC is more common in men than expected, and often misdiagnosed as chronic nonbacterial prostatitis. The aim of this study was to review clinical presentation of BPS/IC in men and analyze correlations between the symptoms, cystoscopic and urodynamic findings.

Study design, materials and methods

A retrospective chart review for male patients diagnosed with BPS/IC between 1995 and 2012 was conducted. The diagnosis was based on ESSIC criteria. The Patients' symptoms at presentation were documented during clinic interview which include: Suprapubic pain/discomfort (SPP/D), frequency (Freq.), Urgency (Urg.),Nocturia (Noct.), Urgency Urinary Incontinence (UUI), Hesitancy (Hes.), flow, and incomplete emptying (Empty), and graded according to the severity of each symptom using a scale of 4 (0-3). All urodynamic testing conformed to ICS standards. Urodynamic variables used in assessing the patients included the maximum cystometric capacity (MCC), the presence of detrusor over activity, detrusor pressure at maximum flow (PdetQmax), maximum flow rate (Qmax), volume voided, and the post void residual urine volume (PVR). Secondary urodynamic voiding parameters of Bladder Contractility Index (BCI) and Bladder outlet Obstruction Index (BOOI) were calculated and included in the study. All patients underwent cystoscopic examination under general anaesthesia with hydrodistention carried out by applying 80 cm to 100 cm of passive hydrostatic pressure using sterile water. Univariate Analysis of Variance was used to analyze patient's age and the severity of the presenting lower urinary tract symptoms (LUTS) and their correlation to the severity of the cystoscopic findings. The Spearman coefficient was used to define correlation between the urodynamic parameters, LUTS and the cystoscopic findings. Statistical significance was set at $p < 0.05$.

Results

The study included 75 male patients. The mean age was 45.5 years (SD12.3) (range 22-78) with no significant relation found between the Cystoscopic grade and age. Suprapubic pain/discomfort (SPP/D) was the only symptom that is significantly associated with the cystoscopic grade of BPS/IC (p=0.030), table (1). There was a significant negative correlation between the maximal cystoscopic capacity and the severity of the incomplete emptying (p=0.047) table (2), and between the maximal cystometric capacity and nocturia (Spearman's rho = -.482, p=0.000), table (3). No significant correlations were found between the urodynamic parameters and the cystoscopic findings.

Table (1): Association between BPS/IC cystoscopic grade and symptoms

Irritative Symptom	**P value**
Supra pubic pain / Discomfort	**0.030**
Frequency	0.317
Urgency	0.805
Nocturia	0.322
Urgency Urinary Incontinence	0.179
Obstructive Symptoms	**P value**
Hesitancy	0.739
Flow	0.05 2
Incomplete Emptying	0.1 42

Table (2): Association between maximal cystoscopic capacity and symptoms

Irritative Symptom	**P value**
Supra pubic pain / Discomfort	.667
Frequency	.917
Urgency	.524
Nocturia	.596
Urgency Urinary Incontinence	.590
Obstructive Symptoms	**P value**
Hesitancy	.262
Flow	.124
Incomplete Emptying	**.047**

Table (3): Correlation between symptoms & urodynamic study parameters:

		SPP /D	Freq.	Urg.	Noct.	UUI	Hes.	Flow	Empty
MCC	Spearman's	-0.081	-0.223	-0.141	**-0.482**	-0.081	0.130	0.082	-0.104
	P value	0.566	0.109	0.312	0.000	0.565	0.354	0.561	0.461
DCI	Spearman's	-0.219	0.139	0.023	-0.091	0.258	-0.078	0.057	0.006
	P value	0.127	0.337	0.874	0.530	0.070	0.590	0.692	0.964
BOOI	Spearman's	0.142	0.190	0.169	0.015	0.085	-0.051	0.132	0.071
	P value	0.324	0.186	0.240	0.920	0.558	0.725	0.359	0.622
PVR	Spearman's	0.247	0.055	0.048	0.011	-0.083	0.123	0.250	0.071
	P value	0.087	0.707	0.744	0.939	0.572	0.401	0.084	0.622

Interpretation of results

Patients generally present with mild symptoms in the early phase of BPS/IC, and over time as the condition progresses they present with more symptoms of increasing intensity and severity. This study showed that the severity of SPP/D is significantly associated with the cystoscopic grade of BPS/IC. (p=0.030), which confirms our clinical impression that the severity of SPP/D correlate to the severity of bladder inflammation, and supports the our expectation that the diagnosis of BPS/IC in men is made primarily in those who have intense pain and voiding symptoms suggesting the bladder is the more obvious cause of the problem, and the possibility that men with milder symptoms are typically diagnosed with chronic prostatitis rather than BPS/IC.

The mean maximal cystoscopic capacity (619.33ml, SD 151.767) was larger than the mean maximal cystometric capacity (307.68, SD 146.739), and it did not show correlation with the severity of the presenting symptoms except for incomplete emptying, (p=0.047).

Bladder distension produces pain in patients with BPS/IC resulting in small bladder volume, making patients with BPS/IC voiding more frequently with lower volumes. The ICDB study reported that daytime, night-time, and 24-hour frequency correlated with a decreased volume at first sensation to void and lower maximal cystometric capacity. Although this study did not show correlation between the maximal cystometric capacity and day time frequency, it showed a significant negative correlation between the maximal cystometric capacity and nocturia (Spearman's rho = -.482, p=0.000).

Concluding message

Severity of the SPP/D is significantly associated with degree of glomerulations on cystoscopy**.** Inverse association was found between the severity of incomplete emptying and the maximal cystoscopic capacity and severity of nocturia and the maximal cystometric capacity.

Disclosures

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