

## CHRONIC LOWER URINARY TRACT SYMPTOMS IN YOUNG MEN WITHOUT SYMPTOMS OF CHRONIC PROSTATITIS: URODYNAMIC ANALYSES IN 308 MEN AGED 50 OR LESS

### Hypothesis / aims of study

Chronic lower urinary tract symptoms (LUTS) among young men often yield diagnostic dilemmas. Previous studies only considered small populations and focused on men who had previously diagnosed with chronic prostatitis [1,2]. We investigated the etiologies of LUTS and compared urodynamic characteristics between different diagnostic groups in young men with chronic LUTS.

### Study design, materials and methods

We reviewed the medical records of 308 men aged between 18 and 50 who had undergone an urodynamic study for chronic LUTS ( $\geq 6$  months) without symptoms suggestive of chronic prostatitis. Patients with pelvic/inguinal pain or bacterial infection and/or more than 10 leukocytes in expressed prostatic secretions at any time before the urodynamic study were excluded from the study population.

### Results

Mean age was 40.4 ( $\pm 10.1$ ) years and mean symptom duration was 38.8 ( $\pm 49.2$ ) months. Urodynamic evaluations demonstrated primary bladder neck dysfunction (PBNB) in 26.0% of cases, dysfunctional voiding (DV) in 23.4%, and detrusor underactivity (DU)/acontractile detrusor (AD) in 12.7% as voiding dysfunction (Table 1). As a single storage dysfunction, detrusor overactivity (DO) was found in 13.3%, small cystometric capacity in 17.9%, and reduced bladder sensation in 5.2% (Table 1). Most of demographics and types of clinical symptoms were not different between different diagnostic groups. While 53.9% of voiding dysfunctions had concomitant storage dysfunctions, 69.6% of storage dysfunctions were found to have concomitant voiding dysfunctions. Men with DV or DU/AD exhibited lower maximum cystometric capacities than those with normal urodynamics. Low bladder compliance was most frequent in PBNB (10.0%,  $p=0.025$ ). In storage dysfunctions, men with DO were shown to have higher detrusor pressure in voiding than those with the other storage dysfunctions ( $p < 0.01$ ).

### Interpretation of results

Our study showed that most of demographics and types of clinical symptoms were not different among young men with the specific urodynamic etiologies of LUTS. We recommend that it is essential to perform urodynamic evaluation to investigate the possible etiologies of LUTS in young men with chronic LUTS, especially those with refractory symptoms. A high index of suspicion for possible etiologies for LUTS may be important for accurate and timely diagnosis of treatable LUTS in young men. In the future, there should be needs learning more about natural history of PBNB, DV, and other possible etiologies of LUTS in young men.

### Concluding message

As a single specific dysfunction, PBNB was most frequent, followed by DV and DU/AD. Storage dysfunctions were frequently associated with concomitant voiding dysfunctions. Urodynamic investigation in this population is helpful in making an accurate diagnosis and may guide adequate treatment as clinical symptoms are not useful in predicting a specific urodynamic etiology.

**TABLE 1.** Urodynamic diagnoses in 308 young males with chronic lower urinary tract symptoms

Voiding phase dysfunction		N (%)	Storage phase dysfunction		N (%)
PBND	total	80 (26.0)	DO	total	70 (22.7)
	alone	43 (14.0)	alone		11 (3.6)
	with storage dysfunctions	37 (12.0)	with other storage dysfunctions		5 (1.6)
	with other voiding dysfunctions	0 (0)	with voiding dysfunctions		30 (9.7)
			with both other storage and voiding dysfunctions		24 (7.8)
DV	total	72 (23.4)	SC	total	83 (26.9)
	alone	25 (8.1)	alone		15 (4.9)
	with storage dysfunctions	47 (15.3)	with other storage dysfunctions		5 (1.6)
	with other voiding dysfunctions	0 (0)	with voiding dysfunctions		40 (13.0)
			with both other storage and voiding dysfunctions		23 (7.4)
DU/AD	total	34/5 (12.7)	RBS	total	18 (5.8)
	alone	17/3 (6.5)	alone		8 (2.6)
	with storage dysfunctions	17/2 (6.2)	with other storage dysfunctions		0 (0)
	with other voiding dysfunctions	0 (0)	with voiding dysfunctions		8 (2.6)
			with both other storage and voiding dysfunctions		2 (0.6)

Seventy-nine (25.6%) had normal urodynamic findings.

Low bladder compliance ( $\approx 20\text{mL/cmH}_2\text{O}$ ) was found in 16 patients and all these cases were associated with voiding phase or storage phase urodynamic dysfunctions.

PBND, primary bladder neck dysfunction; DV, dysfunctional voiding; DU, detrusor underactivity; AD, acontractile detrusor; DO, detrusor overactivity; SC, small bladder capacity; RBS, reduced bladder sensation.

#### References

1. Nitti VW et al, J Urol 2002;168:135-8
2. Wang CC et al, Eur Urol 2003;43:386-90

#### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Institutional Review Board of Seoul National University Bundang Hospital **Helsinki:** Yes **Informed Consent:** No