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ANALYSIS OF URODYNAMIC FINDING OF BLADDER OVERACTIVITY PATIENTS

Aims of Study: Detrusor overactivity can result from dysfunction of any part of the reflex loops between the bladder afferents and efferents or from an imbalance between the excitatory and inhibitory control systems of the bladder, integrated by complex interactions between cortical areas, subcortical areas and the brainstem (The etiology and pathophysiology of bladder overactivity are very variable and the classification is rather crude). Bladder overactivity is one that is shown objectively to contract, spontaneously or on provocation, during the filling phase while the patient is attempting to inhibit micturition. But there is no classification system of bladder overactivity according to urodynamic findings. These study aims analyze the urodynamic findings according to level of neurologic defect and presence of neurologic lesion.

Methods: We have retrospectively evaluated clinical charts and cystometric recordings of 362 patients with overactive detrusor function examined consecutively in our laboratory during 4 year period 1995 - 1999. They were assigned to 3 group. The group was based on the level of neurologic lesion. The supraspinal group (n=127) had neurologic deficit on supraspinal level, the spinal group (n=68) had neurologic deficit on spinal level and idiopathic group (n=167) had no neurologic deficit. The parameters studied were maximal cystometric capacity, presence of urge incontinence, bladder sensation (volume at first desire/maximal cystometric capacity), cystometric recording of an involuntary detrusor contraction including frequency of detrusor contraction, volume at occurrence of first unstable contraction, the amplitude of the maximal unstable contraction and duration of unstable contraction. The Wilcoxon rank sum test was used to test for any significant statistical difference in these parameters between 2 groups.

Results: Compared to supraspinal group, spinal group appears to long duration of unstable bladder contraction (p=0.048). Other parameters were no significant different in three groups. There was no statistically significant different between neurologic patients group (supraspinal group + spinal group) and idiopathic group.

	Supraspinal group	Spinal group	Idiopathic group
Maximal cystometric capacity (ml)	312.5 ± 301.9	308.3 ± 143.1	310.1 ± 112.0
Urge incontinence (%)	92/127 (72.4%)	47/68 (69.1%)	88/167 (52.7%)
Bladder sensation	0.368 ± 0.19	0.419 ± 0.59	0.571 ± 0.30
Cystometric recording			
frequency of detrusor contraction (times)	3.44 ± 1.19	3.51 ± 1.46	3.60 ± 1.35
volume at occurrence of first unstable contraction (ml)	172.8 ± 109.8	163.1 ± 101.7	190.5 ± 168.9
amplitude of the maximal unstable contraction (cmH ₂ O)	59.1 ± 32.0	62.8 ± 32.5	69.4 ± 102.1
duration of unstable contraction (seconds)	81.6 ± 77.1	115.6 ± 121.2	79.4 ± 71.6

Conclusions: We could not find the different findings in urodynamic study according to neurologic lesion levels or presence of neurologic abnormality. Regardless of etiology, the urodynamic finding is similar. So, we suggest it is impossible to identify the cause of bladder overactivity by urodynamic study.