Author(s) Myung-Soo Choo, Hongsik Kim, Kiyeol Choi, Taehan Park

Institution, city, country Department of Urology, Asan Medical Center, Seoul, Korea

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URODYNAMIC DIFFERENTIATION OF UNSTABLE BLADDER

AIMS OF STUDY

The unstable bladder is one that is shown objectively to contract during the filling phase spontaneously or, on provocation while the patients is attempting to inhibit micturition. The unstable baldder includes detrusor hyperreflexia(DH) with neurologic disorders and detrusor instability(DI) without neurologic disorders(1). But DI has not been clearly understood at present time and some investigators proposed to change DI into phasic detrusor contraction because of its non specificity and normal occurrences in most circumstances(2) There is no urodynamic criteria for differentiating DI from DH yet(3) If there is possible way to differentiate DH from DI by conventional urodynamic study, we can reduce inadquite management and detect unknown neurologic disorders earlier. This study examined the findings in urodynamic variables between DH and DI for the proper managements.

PATIENTS AND METHODS

176 urodynamic records of patients with unstable bladder were examined 97 patients had DH and 79 patients symptomatic DI who had no evidence of neurologic disorder The volume at the first sensation(Vfs), the volume at the first contraction(Vfc), the detrusor pressure of Vfc(P_{detVfc}), the maximal detrusor pressure(P_{detm}), the capacity of bladder(Vc), the maximal urethral closing pressure(MUCP), the postmicturition residual urine volume(RU), and the ratio of volume at the first sensation and the capacity of bladder(Vfs/Vc) , were assessed The Mann-Whitney U test was used to test the difference between mean values.

RESULTS

The mean values with standard deviation and 'p' value were described.

	DH	DI	p value
Volume at the first sensation(mL)	124 2±27.6	154 9±45.6	0.003
Volume at the first contraction(mL)	154±79.3	158.4±68 9	0.74
Detrusor pressure of Vfc(cmH_2O)	54.6±27.6	45.1±35.8	0.01
Maximal detrusor pressure(cmH_2O)	69 2±27.6	53 0±38.1	0.01
Capacity of bladder(mL)	248.4±135.8	246.0±108.1	0.80
Maximal urethral closing pressure(cmH_2O)	69.2±27 6	65 5±24.1	0.45

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Volume of residual urine(mL)	90.5±100.5	44 5±54.4	0 004
Ratio of Vfs/Vc(%)	45±24	62±33	0.001

Patients with DH showed smaller volume at the first sensation and stronger detrusor contration and fullness of bladder feeling earlier than patients with DI. Although volume of residual urine was variable in the patients , it was larger in the patients with DH

CONCLUSIONS

Our results suggest that urodynamic indicies can give us few clues in differentiating DH with neurologic disorders from DI The volume at the first sensation, the detrusor pressure of Vfc, the maximal detrusor pressure, and the ratio of Vfs and Vc are especially useful

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