

COMPARISON OF AMBULATORY AND CONVENTIONAL URODYNAMICS IN FEMALES WITH STRESS URINARY INCONTINENCE

Hypothesis / aims of study

To compare the application of ambulatory urodynamic (AUM) and conventional urodynamic (CUD) in detecting stress incontinence (SUI) and the detrusor over activity (DO) in females.

Study design, materials and methods

Incontinence questionnaire short form (ICI-Q-SF) , CUD and AUM were administrated in 30 female patients, the age was 32~63 (49.4 ± 9.449) years old , and duration of symptom was 1~9 (4.7 ± 2.784) years. Patients were divided into 3 groups of mild (n=9), moderate (n=15) and severe (n=6) according to ICI-Q-SF. Three micturition cycles were recorded during AUM.

Results

Table 1 Comparison of AUM and CUD diagnoses in 30 females with stress or mixed incontinence symptoms (n)

Diagnosis by CUD (n)	Diagnosis by AUM (n)			
	SUI (19)	DO (1)	Mixed (2)	Normal (8)
SUI (19)	12		7	
DO (1)		1		
Mixed (2)			2	
Normal (8)	6	1		1

Table 1 shows the discrepancy between AUM and CUD diagnoses in 30 females with stress or mixed incontinence symptoms. 19 had SUI, 1 had DO, 2 had Mixed and 8 had normal results in CUD. Among women (n=19) diagnosed SUI by CUD, 12 had SUI and 7 had Mixed results. Among women (n=8) diagnosed normal by CUD, 6 had SUI, 1 had DO and 1 had normal results.

Table 2 Comparison of AUM and CUD results in 21 moderate and severe SUI patients ($\bar{x} \pm s$)

	AUM	CUD	t value	P value
ALPP (cmH ₂ O)	76.0 ± 11.9	101.3 ± 27.9	2.202	0.0480
MF (ml/s)	14.9 ± 6.2	18.8 ± 7.7	1.108	0.2863
VV(ml)	203.6 ± 123.4	478.4 ± 196.1	3.138	0.0086
Pdet-max (cmH ₂ O)	34.8 ± 16.2	18.5 ± 7.0	2.604	0.0208

Table 2 shows the AUM and CUD results in twenty-one moderate and severe SUI patients diagnosed by ICI-Q-SF.

Interpretation of results

SUI and DO detected by AUM were 90%(27/30) and 37%(11/30) , significantly more than those by CUD 70%(21/30) and 10%(3/30) (P=0.021,P=0.041). Twenty-one moderate and severe SUI patients diagnosed by ICI-Q-SF, detected by AUM and CUD simultaneously showed that abdominal leak point pressure(ALPP) and voided volume were lower, and detrusor pressure was higher recorded by AUM than those by CUD significantly (p<0.05).

Concluding message

Our findings suggested that SUI and DO detected by AUM were easier than those by CUD. The reason for this may be related to the lower ALPP existed during the AUM. Moreover, in the absence of AUM, many patients would have been misdiagnosed on their CUD results. AUM was an useful additional tool in clinical urological practice for those patients where CUD had failed to explain their symptoms.

Disclosures

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