Author(s) SC Radley, DJ Rosario, CR Chapple

Institution, city, country Department of Urology Research, Royal Hallamshire Hospital, Sheffield, England

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INTER-OBSERVER AGREEMENT IN INTERPRETING AMBULATORY URODYNAMICS IN WOMEN

Aims of Study

Ambulatory urodynamic monitoring (AUM) generates data over several hours. Data is analysed following completion of the study. Little has been published on the variation in interpretation of these data. This prospective study assesses the level of agreement between 2 independent observers using a standardised protocol for the conduct and interpretation of AUM in women presenting with urinary urgency.

Methods

111 women underwent both AUM and videocystometrography (VCMG) in random order. VCMG was performed and interpreted according to ICS criteria AUM was carried out using the MMS-UPS2020® according to a standardised protocol. Two investigators (AUM1 and AUM2), blinded to the other's findings and those on VCMG, independently interpreted the traces along with the subject's urinary diary. No arbitrary minimum amplitude was set for the detection of detrusor activity, which was determined by the quality and resolution of the subtracted detrusor pressure trace itself. DI was only diagnosed if bladder involuntary detrusor activity overactivity was associated with urgency and /or urge incontinence. GSI was diagnosed when urine loss was reported and detected in the absence of detrusor instability. In women with coexistent DI, GSI was only diagnosed when leakage was reported in the absence of detrusor activity and a positive pad test.

Results

The diagnoses recorded in 100 women completing the study are listed in table 1. AUM2 considered 6 AUM studies to be inadequate for diagnostic purposes. AUM2 also considered these 6 studies and a further 1 study to be inadequate.

Table 1 - Overall Diagnosis

	AUM 1	AUM 2	VCMG
Pure DI	53	47	21
Pure GSI	11	12	30
Mixed DI and GSI	20	20	9
Normal	10	15	39
Uninterpretable	6	6	1
Totals	100	100	100

Tables 2 and 3 show the agreement for DI and GSI between the 2 observers on AUM and between AUM and VCMG. The inter-observer agreement on AUM for DI and GSI was 87% and 83% respectively.

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Table 2 - Agreement for DI

	with DI	no DI	Unsure*	%
AUM 1 with AUM 2	65	18	4	87
AUM 1 with VCMG	28	20	0	48
AUM 2 with VCMG	25	24	0	49

Table 3 - Agreement for GSI

	GSI	no GSI	Unsure*	%
AUM 1 with AUM 2	24	55	4	83
AUM 1 with VCMG	22	49	0	71
AUM 2 with VCMG	25	51	0	76

Unsure* = uninterpretable traces

Conclusions

This is the first prospective study of inter-observer agreement using AUM. Interpretation according to a standardised protocol, results in a high consistency between observers. The findings lend further support to the use of AUM as a clinical tool in the investigation of lower urinary tract function.

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