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Title (type in CAPITAL LETTERS, leave one blank line before the text):

A POSTAL SURVEY OF URODYNAMIC FACILITIES AND TEST PROCEDURES IN UROGYNAECOLOGICAL UNITS IN ENGLAND AND WALES

Aims of study:

To determine the urodynamic facilities available, and urodynamic test procedures in urogynaecology units in England and Wales. The last survey of urodynamic equipments used in the UK was by Lewis et al in 1988[1]. More recently Hosker et al[2] conducted a study to determine the current practice of urodynamics in the UK but not the availability of test equipment.

Methods:

A questionnaire was sent to one hundred urogynaecological units in England and Wales in May / June 1999. Recipients were asked to complete the forms or forward them to the most appropriate person in the department if they were not currently involved in urodynamic testing of female patients.

Results:

We received 61 replies (61% Response rate) but one was excluded from analysis because it was inadequately completed. Missing answers were also excluded from analysis of individual questions.

Availability of equipment (Response = 50)

Pad test	30 (60%)
Free flowmetry	48 (96%)
Urethral pressure profilometry	28 (56%)
Bladder neck electrical conductance	6 (12%)
Distal urethral electrical conductance test	5 (10%)
Ultrasound scan	41 (82%)
Static cystometry	50 (100%)
Ambulatory cystometry	25 (50%)
Video cystourethrography	24 (48%)
Electromyography	5 (10%)

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Static cystometry equipment manufacturer (Response = 50)

Dantec	19 (38%)	
Lectromed	7 (14%)	
Albyn	4 (8%)	
Mms	4 (8%)	
Laborie	1 (2%)	
Micromedics		1 (2%)
System 7	1 (2%)	
Dik	1 (2%)	
Mentor	1 (2%)	
" In house"		1 (2%)
Combination		2 (4%)
Not stated		8 (16%)

Test methods

Only 51% of the units have a referral protocol for urodynamic testing, and 84% would perform urodynamic testing on all patients with urinary incontinence, whilst 5% would test only after failed surgery. 89% perform a urinalysis before testing, and 15% use prophylactic antibiotics.

92% complete a frequency volume chart before testing. 47% estimate the residual urine with a combination of urethral catheterization and Ultrasound scan; whilst 16% use a urethral catheter only. 10% have facilities for DUEC testing, but only 1 (2%) use this routinely.

98% would perform both a filling and voiding cystometry, 2% perform a filling cystometry only. 61% use normal saline for cystometry, 18% use sterile water, 10% use contrast, 8 % use both saline and contrast, and 2% use " natural filling" . 88% fill the bladder with fluids at room temperature, and 94% fill at a rate of between 10 - 100 ml/min. There is a wide variation in filling catheter size, 23% use a 10fr catheter, 4% use a 4fr catheter. 63% use water filled pressure transducer, and 19% use a micro-transducer.

67% remove the filling catheter prior to a voiding cystometry, with 77% of the patients sitting for the voiding cystometry, and 17% using a combination of sitting and standing positions for this test.

Conclusion:

This study shows the current state of urodynamics test equipment availability and utilization in England and Wales. There appears to be a wide variation in test facilities and procedures in urogynaecological units. This therefore brings into question the reproducibility and comparability of the test results produced from different units. There appears to be a need for review of urogynaecological units in England and Wales, and the development of guidelines on the minimum equipment standards, test procedures and techniques for urogynaecological units.

References:

1. LewisP, Shepherd AM, Abrams PH. Urodynamics: which tests and equipment are used? Neurourol Urodyn 1988; 7: 182 - 183.

2. Hosker Gl, Kilcoyne PM, Smith ARB. Urodynamic practice in the UK. 28th Annual Meeting ICS, Jerusalem, Israel, 1998; pp 66 - 67 (Abstract)