

HAS STANDARDISATION IN URODYNAMICS IMPROVED REPRODUCIBILITY OF SYMPTOMS AND CLINICAL MANAGEMENT?

Hypothesis / aims of study

The aim of urodynamic study is to reproduce symptoms during objective monitoring of bladder behaviour in order to arrive at an accurate diagnosis which may result in better clinical management. The ICS has played a pivotal role in standardising the technique for this investigation. Has this resulted in a better reproduction of symptoms during urodynamics? If so, is there a resultant improvement / change in clinical management?

Study design, materials and methods

Referrals for urodynamic studies were made by all consultants and registrars in our department. The request forms were not screened prior to the studies. All studies were performed by a single investigator according to the ICS protocol. In order to provoke and elicit detrusor overactivity, multiple coughing (at least 5) and non-physiological filling rate (75-100 ml/min) were used. The endpoints used for assessing reproduction of symptoms include the report of urgency and the demonstration of detrusor overactivity. Urological history and urodynamic results were recorded prospectively. Clinical diagnoses (based on history, uroflowmetry and post-micturition bladder ultrasound scan) were compared with urodynamic diagnoses. Each study was reviewed to assess if results from the investigation had altered clinical management.

Results

During the period between November 2004 and December 2005, 69 patients had urodynamic studies. Each had a single study. Their demographics were summarised as follows.

	N	Age range (years)	Mean age (years)
Male	54	22-90	59.9
female	15	29-71	51.5

46 patients had urgency as their main complaint. 67% (31/46) had demonstrable detrusor overactivity. On the other hand, 29% (9/31) of these studies did not result in a change in the clinical management. Within the whole group, 32% (22/ 69) of the studies did not alter the subsequent management. 36% (8/22) of these patients had identical clinical and urodynamic diagnoses. Of the 47 studies that were considered beneficial, i.e. resulting in altering the clinical management, 19% (9/47) had identical clinical and urodynamic diagnoses. The proportion of patients having matching clinical and urodynamic diagnoses was not significantly different between the two groups (no change vs. altered clinical management) ($p>0.05$, chi-square test).

Interpretation of results

67% of our urodynamic studies were successful in reproducing patients' urgency and demonstrating detrusor overactivity. This is in comparison to 38% and 51% reproducibility of urgency in earlier studies (BJU 1979;51:204, BJOG 1980;87:893). Despite reproducing patients' symptoms, 29% of these 'successful' studies did not result in any change in clinical management.

Concluding message

The improvement and standardisation in urodynamic techniques have resulted in an enhancement in reproducing patients' symptoms during the study. However, successfully reproducing symptoms does not necessarily result an improvement or change in the clinical management. A substantial proportion (29%) of these patients could still be managed correctly without having had urodynamics. Other factors, e.g. careful selection of patients for this investigation, are equally important in ensuring its use in appropriate patients who need this investigation and who are likely to benefit from the results.

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