

REPEAT USE OF A FILLING / VOIDING CYSTOMETROGRAM DOES NOT ALTER THE URODYNAMIC DIAGNOSIS IN ADULTS WITH IDIOPATHIC DETRUSOR OVERACTIVITY - A LONG-TERM RETROSPECTIVE STUDY

Hypothesis / aims of study

Cystometry is an expensive, time consuming and demanding investigation. (1) Furthermore, it is not without risk. Associated complications include infection, gross haematuria and post-investigational urinary retention (2). Although it is frequently, and often repeatedly, performed in patients with detrusor overactivity, its precise role in providing additional information regarding previously established diagnosis and future management remains unclear. With regard to the long-term follow-up of patients with detrusor overactivity, little data is available. One previous study from 1981, showed that 92% of patients receiving a urodynamic diagnosis of detrusor overactivity, had the same diagnosis made at subsequent CMG (3). The mean interval of follow-up however, was only 19 months and the number of cases of idiopathic detrusor overactivity examined was rather small. We hypothesized that in cases of (urodynamically proven) idiopathic detrusor overactivity, a repeat CMG in the presence of unaltered symptoms would not lead to a change in the (qualitative) urodynamic diagnosis.

Study design, materials and methods

We examined retrospectively, the results from patients who had undergone more than one filling / voiding cystometrogram (CMG) in a single teaching hospital urodynamics department between 1992 and 2004, and had received a urodynamic diagnosis of detrusor overactivity on the initial CMG. We excluded those patients who had an identified neurological disease, bladder outlet obstruction and genuine stress incontinence. We also excluded patients who had undergone recent bladder outlet surgery or reconstructive procedures immediately prior to, or between their CMGs.

The patients were identified from a database and an attempt was made to categorise the patients into those with a qualitatively unchanged urodynamic diagnosis and those in whom the diagnosis had changed as a result of repeat cystometry.

We used Student's t-test to identify a statistically significant difference between these two groups.

Results

Forty patients who had undergone at least 2 CMGs (mean: 2.1, range: 2 – 4) were identified for inclusion and used in the analysis. The mean interval between CMGs was 51.5 months (range: 3 - 123). The mean age of the patients at their final CMG was 61 years of age (range: 30 - 83) and 63.4% (26) of the patients were male ($p < 0.05$). In 97.6% (40) of the cases, the urodynamic diagnosis of detrusor overactivity was unchanged on the subsequent study ($p < 5 \times 10^{-41}$). The diagnosis was changed in only one patient. This study was performed for persistent frequency, with occasional urgency and urge incontinence. On repeat CMG after an interval of 72 months, the bladder was found to be stable, but there had been a deterioration in compliance.

Interpretation of results

Despite the comparatively long interval between CMGs, there was clearly no change in urodynamic diagnosis made in the overwhelming majority of patients reviewed in this study; the repeat investigation merely seemed to confirm the findings of the first CMG. This supports previous work demonstrating that the urodynamic findings in (symptomatic) patients with detrusor overactivity persist (3). Our study confirms that this observation applies to patients suffering from idiopathic detrusor overactivity.

Concluding message

In view of the cost, adverse effects and inconvenience to both urologists and patients, the use of repeated CMGs in the absence of a significant alteration in the pattern of urological symptoms, should be discouraged in patients with idiopathic detrusor overactivity.

References

1. Comprehensive Urology, Mosby 2001, Chapter 6, page 74).
2. Morbidity of the evaluation of the lower urinary tract with transurethral multichannel pressure-flow studies. *J Urol*. 1998 **159**:191.
3. A long-term study of the persistence of the urodynamic characteristics of the unstable bladder. *Br J Urol* 1981 **53**:310