

## IS THERE STILL A ROLE FOR THE ICE WATER TEST AS A PROVOCATIVE MANEUVER?

### Hypothesis / aims of study

The ice water test (IWT) has been known to be useful for detecting detrusor overactivity during cystometry since the 1950s. Our study aims to assess its role in the contemporary age, among other, more modern tests.

### Study design, materials and methods

Between January 2008 and January 2011 in our department we performed a prospective study on 87 invasive urodynamic investigations for various indications, including stress urinary incontinence, overactive bladder, SCI or other neurogenic disorders, during which no detrusor overactivity could be demonstrated. The patients were 39 males (29-74 years old) and 48 females (21 – 64 years old). During cystometry, 100ml of sterile water at 4<sup>0</sup> C was instilled into the empty bladder. The test was considered positive if any detrusor contraction was observed on the Pdet curve on the urodynamic machine. Data was recorded into the patient file and integrated in the clinical context of the examination. Three groups were defined based on the indication for urodynamics: A. Stress urinary incontinence (28 cases), B. Idiopathic overactive bladder (45 cases), C. Neurogenic bladder (5 patients), D. Other indications (9 cases). The results of the IWT were assessed for each group.

### Results

In the A group, the test was positive in 1 male and 2 females (10% overall). In the B group, the test was positive in 42 cases, 19 males, 23 females (93% overall). In the C group, the test was positive in all 5 patients. In the D group 1 patient developed detrusor overactivity after the test.

### Interpretation of results

In the neurogenic bladder group, the number of patients that did not developed detrusor overactivity using standard technique is small, which indicates that the IWT is rarely needed in this group.

### Concluding message

The IWT is a cheap, yet reliable tool that is able to differentiate neurogenic conditions from other pathologies. The main indication seem to be idiopathic overactive bladder, since in the neurogenic bladder the overactive detrusor is usually easy to demonstrate.

<b><i>Specify source of funding or grant</i></b>	<b>None</b>
<b><i>Is this a clinical trial?</i></b>	<b>Yes</b>
<b><i>Is this study registered in a public clinical trials registry?</i></b>	<b>No</b>
<b><i>Is this a Randomised Controlled Trial (RCT)?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>we used a standard procedure</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>