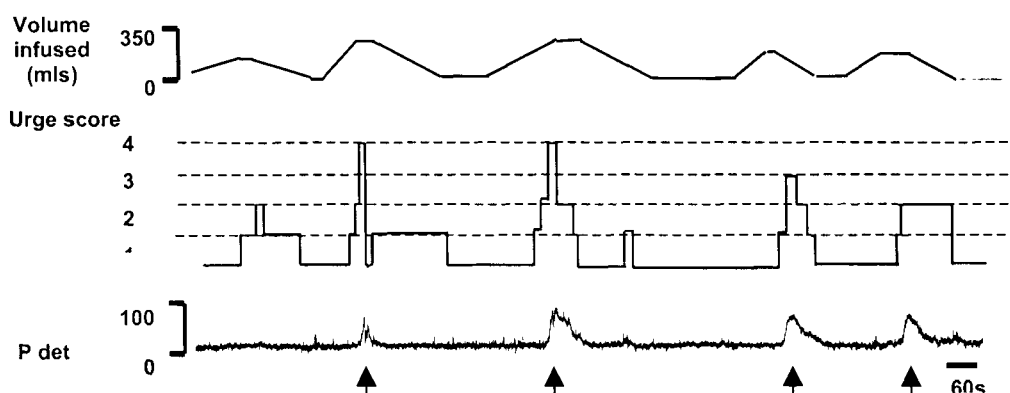


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Title (type in CAPITAL LETTERS, leave one blank line before the text) URODYNAMICS, SYMPTOMS AND SYMPTOMATOLOGY A VALIDATION OF A NEW, MORE OBJECTIVE MEASURE OF URINARY URGE
<u>AIMS OF STUDY</u> Urodynamics enables an objective diagnosis of detrusor instability to be made but the traces tell us little about patients' symptomatology [1] It is often sensations of urge occurring at low bladder volumes (which may be occurring independently of unstable detrusor contractions) which cause troublesome symptoms for patients. frequency and urgency An objective measure of these symptoms should aid accurate evaluation of symptoms and direct subsequent management of the overactive bladder We have used a keypad urge score device to measure the sensations perceived by patients during bladder filling and we have shown that these sensations can be suppressed by neuromodulation [2] The aim of this study was to determine the validity of our more objective measure of bladder sensations during filling CMG using a technique adapted from a standard psychophysical method [3]
<u>METHODS</u> 10 patients with idiopathic detrusor instability were included and their usual medication prescribed for overactive bladder discontinued All patients had a control medium fill cystometrogram using normal saline warmed to body temperature During this CMG and all subsequent investigations patients used a keypad device, independently and without prompting, to signal their level of urge (scored from 0-4) The patient activated device was connected to the computer running the urodynamic programme and in this way the urge score was continuously displayed and recorded The true threshold for each level of urge were then determined by filling or emptying the bladder, at the same rate of fill, around urge scores 1 and 2 A reversible pump was used and the patients were not told whether their bladders were being filled or emptied. In this way an equal number of measures of bladder volume at each urge score were generated.
<u>RESULTS</u> The patient activated, keypad device gave reliable and repeatable measures of the different levels of sensation and urge experience by patients during filling cystometrograms There was a high level of consistency between bladder volumes and the different levels of sensations signalled by each patient For each of the urge levels tested, whether approached by filling or emptying the bladder there was a significant difference in the bladder volume measured

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Urge level	Mean (SEM) bladder volume (mls)	p value
1	182 (22)	*
2	254 (16)	*
3	355 (35)	*

Figure 1 A representative urodynamic trace from one patient. As filling and emptying occurs the patient urge score is continuously recorded 0= no urge, 1= mild, 2= moderate, 3= strong & 4= "desperate". Arrows in the figure show unstable detrusor contractions occurring during periods of filling, these are associated with different levels of urge score. The bladder volume at different urge levels are shown in the table. P value determined by student's t-test, *p<0.05

CONCLUSIONS: The patient activated keypad device is a useful measure of the sensations experienced by patients during filling cystometrograms. This more objective approach overcomes some of the problems of subjective assessment by avoiding prompted replies during discourse with the patient.

1. *Urological Clinics of North America* 1996;23:417-425
2. *Neurourology & Urodynamics* 1999;18 (4):403.
3. *American Journal of Psychology* 1962;75:413-417

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