

## ARE PATIENTS WITH OVERACTIVE BLADDER SYMPTOMS AND DETRUSOR OVERACTIVITY DIFFERENT FROM THOSE WITH OVERACTIVE BLADDER SYMPTOMS BUT WITHOUT DETRUSOR OVERACTIVITY?

### Hypothesis / aims of study

Not all patients with overactive bladder (OAB) symptoms have demonstrable detrusor overactivity (DO). The aim of the study was to identify the differences between patients with OAB and DO and those with OAB but without DO.

### Study design, materials and methods

We prospectively recruited patients with OAB symptoms between December 2008 and September 2009. Patients with neurological disorders were excluded. All patients completed a 3-day frequency-volume chart. Symptom severity was evaluated with International Prostate Symptom Score (IPSS) and Overactive Bladder Symptom Score (OABSS) questionnaires. All patients underwent urodynamic pressure-flow studies. We compared demographic, IPSS, OABSS, urinary frequency and volume, and urodynamic variables between patients with and without DO.

### Results

Of the 133 patients enrolled (76 women and 57 men), DO was demonstrated in 80 patients (60.2%). Interestingly, men with DO had significantly shorter body height than men without DO ( $P = 0.037$ ). All other demographic variables including age, body weight, waist circumference, concomitant systemic diseases, smoking, constipation, and history of primary nocturnal enuresis were similar between OAB patients with and without DO (table 1). IPSS and OABSS total scores did not differ between the groups. However, the nocturia subscore on the OABSS differed significantly between the OAB patients with DO and those without ( $P = 0.048$ ). There were no significant differences in urodynamic variables, urinary frequency, or volume between OAB patients with and without DO (table 2).

### Interpretation of results

The diagnosis of OAB based on urinary symptoms underdiagnosed the condition of DO and only around 60% of patients with OAB symptoms had DO. Differences in subjective symptoms severity do exist between OAB patients with and those without DO. OAB patients with DO experience more nocturia episodes. Besides, OAB men with DO have a shorter body height. Nevertheless, our data collection was limited by the relatively small database and the selection bias may occur. The study group should be expanded in the future.

### Concluding message

Most demographic data, subjective symptom severity, and urodynamic variables were not helpful in predicting which OAB patients would have urodynamic DO. Patients with OAB symptoms and urodynamic DO were not different from those with bladder symptoms but without DO.

TABLE 1. Demographic variables

	With DO	Without DO	P value
Age ( yrs )	67.58	64.91	>0.05
BMI $\geq$ 24 ( % )	53.2	57.8	>0.05
Waist circumference: M>90cm, F>80cm ( % )	56.4	68.2	>0.05
Diabetes mellitus ( % )	26	19.6	>0.05
Hypertension ( % )	48.6	43.1	>0.05
Chronic pulmonary obstructive disease ( % )	6.2	4.3	>0.05
Hyperlipidemia ( % )	21.3	21.3	>0.05
Hyperuricemia ( % )	13.4	14.3	>0.05
Smoking ( % )	13.6	9.5	>0.05
Constipation ( % )	33.9	31	>0.05
Nocturnal enuresis history ( % )	22.2	18.5	>0.05

DO = detrusor overactivity ; BMI = body mass index.

TABLE 2. Frequency volume chart variables

	With DO	Without DO	P value
24 hour frequency	11.26	11.01	> 0.05
24 hour production ( ml)	1764.54	1784.49	> 0.05
Maximum voided volume ( ml)	337.5	383.93	> 0.05
Minimum voided volume ( ml)	53.88	55.73	> 0.05
Nocturia	2.04	1.91	> 0.05
Urge urinary incontinence	1.63	1.16	> 0.05
Urgency	2.62	1.9	> 0.05
Nocturnal urine ratio ( %)	34.28	33.22	> 0.05
First morning void ( ml)	200.72	214.24	> 0.05

DO = detrusor overactivity.

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<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Institutional Review Board, Taipei Veterans General Hospital</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>