

*Abstracts from the 30th Annual Meeting  
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CAN DESENSITIZATION OF BLADDER SENSORY FIBERS RELIEVE URINARY SYMPTOMS IN PATIENTS WITH DETRUSOR INSTABILITY? PRELIMINARY REPORT WITH INTRAVESICAL RESINIFERATOXIN

Aims of study: The demonstration, in the experimental animal, that after chronic spinalization micturition is controlled by an abnormal spinal reflex initiated in bladder sensory C-fibers<sup>[1]</sup> was the rationale for the introduction of C-fiber desensitization as a novel treatment of patients with detrusor hyperreflexia. Either intravesical capsaicin<sup>[2]</sup> or resiniferatoxin<sup>[3]</sup> were used as desensitizing agents. Recently, a similar C-fiber mediated spinal micturition reflex was also shown to emerge in rats<sup>[4]</sup> and humans<sup>[5]</sup> with detrusor instability. Desensitization may, therefore, have a role in the treatment of this bladder dysfunction. Here we report the results of a preliminary clinical study. Resiniferatoxin was chosen as the desensitizing agent due to its low pungency<sup>[3]</sup>.

Methods: Five patients with detrusor instability gave written informed consent to this study. None had had any form of neurological disease and all stopped all anticholinergic medication for at least one week. In addition all patients were screened by hematological and biochemical blood tests, microbiological urinary investigation and ultrasonographic evaluation of the urinary system. A fill cystometry performed in a Dantec instrument and a voiding chart of at least three consecutive days were obtained. Four patients were incontinent and used pads to collect urine. Treatment consisted of one single instillation of 100 ml a 50 nM RTX solution in 10% alcohol in saline left inside the bladder during 30 minutes. All patients were followed at 1 and 3 months after treatment.

Results: Treatment did not cause pain or any significant discomfort. Mean urinary frequency decreased from  $12 \pm 2$  to  $10 \pm 3$  (NS) and to  $9 \pm 2$  ( $p < 0.05$ ) times per day at 1 and 3 months, respectively. Mean daily episodes of urinary incontinence decreased from  $5 \pm 3$  to  $0.8 \pm 1$  ( $p < 0.05$ ) at 1 month and to  $0.5 \pm 0.6$  ( $p < 0.05$ ) at 3 months. First detrusor contraction occurred at a mean bladder volume of  $190 \pm 119$  ml before treatment and increased to  $386 \pm 117$  ml ( $p < 0.05$ ) at 1 month and to  $424 \pm 173$  ml ( $p < 0.05$ ) at 3 months. At the same time points mean maximal cystometric capacity also increased from  $340 \pm 193$  ml to  $441 \pm 139$  ml and to  $445 \pm 170$  ml but these changes lack statistical significance. Individual data are shown in the Table below.

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TABLE

	Frequency			Incontinence			Volume to 1 <sup>st</sup> contraction			Maximal cyst. capacity		
	0	1m	3m	0	1m	3m	0	1m	3m	0	1m	3m
F,45	14	11	12	7.5	2.5	1.3	70	295	184	184	297	195
M,49	15	9	10	0	0	0	300	420	394	350	422	483
F,29	12	14	7	8	0	0	100	364	563	650	364	563
M,70	11	8	8	3	0	0	150	460	618	170	460	620
F,25	10	8	8	1.5	0.8	0.5	333	492	364	350	664	364

**Conclusions:** This preliminary study suggests that intravesical desensitization might be useful in the treatment of patients with idiopathic detrusor instability and warrants the launching of a larger study.

**References:** 1- Urology, 50, Suppl 6A (1997): 36-52. 2- J. Neurol. Neurosurg. Psychiatry, 57 (1994): 169-173. 3-Lancet; 350 (1997):640-64. 4- J. Comp. Neurology, 140 (1988): 864-871. 5- J. Urology 160(1998): 34-38.

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### INVOLUNTARY DETRUSOR ACTIVITY : SO WHAT?

#### Aims of study

To quantitatively assess and compare involuntary detrusor activity (IDA) detected during ambulatory urodynamics (AUM) in symptomatic patients and healthy female volunteers.

#### Methods

A total of 80 AUM studies that showed phasic involuntary detrusor activity (IDA) were analysed. Of these, 70 studies had been performed in women with symptoms of urinary urgency and/or urge incontinence and 10 in asymptomatic volunteers. The conduct and interpretation of AUM followed our standard protocol. Symptoms (urgency and urge incontinence) were recorded by the patient in a diary and by pressing event buttons. Detrusor instability (DI) was diagnosed when IDA occurred in association with urgency and / or urge incontinence.

#### Results

Of the 10 studies in asymptomatic volunteers, IDA was associated with urgency in 7 (70%). All 70 patients in whom IDA was detected during AUM had coincident symptoms. The characteristics of the first and maximum involuntary detrusor contractions for the 2 groups are shown in tables 1 & 2.