

Author Year; Country Score Research Design Sample Size	Methods	Outcome
Kim et al. 2003 USA PEDro=9 RCT Level 1 N=36	<p>Population: 22 males, 14 females, neurologically impaired patients (20 SCI, 7 Multiple Sclerosis, and 9 others) with urodynamically verified detrusor hyperreflexia.</p> <p>Treatment: Randomized double blind, placebo-controlled trial. Intravesical instillation of Resiniferatoxin (RTX) 0.005, 0.025, 0.05, 0.10, 0.2, 0.5, or 1.0 microM of RTX (n=4 each group) or placebo (n=8).</p> <p>Outcome Measures: incontinence episodes, bladder capacity.</p>	<ol style="list-style-type: none"> 1. No statistical significance due to small sample sizes. 2. Intravesical RTX administration was well tolerated. This patient group was refractory to all previous oral pharmacologic therapy, yet some patients responded with improvement in bladder capacity and continence function shortly after RTX administration. 3. In some cases, mean cystometric capacity increased up to 500% over baseline. 4. Incontinence episodes decreased by over 50% for the 2 highest doses. 5. No data available on long term effect of RXT on AD.
	<p>Effect Sizes: Forest plot of standardized mean differences (SMD \pm 95%C.I.) as calculated from pre- to post-intervention data and pre-intervention to retention/follow-up data</p>	

Author Year; Country Score Research Design Sample Size	Methods	Outcome																														
	<p>Kim et al. 2003; Resiniferatoxin (Various Doses)</p> <table><caption>Forest Plot Data (SMD 95% C.I.)</caption><thead><tr><th>Comparison</th><th>SMD (95% C.I.)</th></tr></thead><tbody><tr><td>MCC (0.005µM) (Pre->Post)</td><td>0.57 (-0.67,1.80)</td></tr><tr><td>MCC (0.025µM) (Pre->Post)</td><td>0.37 (-0.85,1.58)</td></tr><tr><td>MCC (0.05µM) (Pre->Post)</td><td>0.58 (-0.66,1.81)</td></tr><tr><td>MCC (0.10µM) (Pre->Post)</td><td>0.58 (-0.65,1.82)</td></tr><tr><td>MCC (0.2µM) (Pre->Post)</td><td>0.54 (-0.69,1.77)</td></tr><tr><td>MCC (0.5µM) (Pre->Post)</td><td>-0.01 (-1.21,1.19)</td></tr><tr><td>MCC (1.0µM) (Pre->Post)</td><td>0.56 (-0.67,1.79)</td></tr><tr><td>MCC (0.005µM) (Pre->Ret)</td><td>-0.32 (-1.53,0.89)</td></tr><tr><td>MCC (0.025µM) (Pre->Ret)</td><td>0.81 (-0.46,2.07)</td></tr><tr><td>MCC (0.05µM) (Pre->Ret)</td><td>-0.02 (-1.22,1.18)</td></tr><tr><td>MCC (0.10µM) (Pre->Ret)</td><td>0.45 (-0.77,1.67)</td></tr><tr><td>MCC (0.2µM) (Pre->Ret)</td><td>-0.32 (-1.53,0.89)</td></tr><tr><td>MCC (0.5µM) (Pre->Ret)</td><td>0.34 (-0.88,1.55)</td></tr><tr><td>MCC (1.0µM) (Pre->Ret*)</td><td>0.71 (-0.54,1.96)</td></tr></tbody></table> <p>-2 -1.5 -1 -0.5 0 0.5 1 1.5 Favours Control SMD (95% C.I.) Favours Treat</p> <p>*Retention data for 1.0µM from 6 week post-baseline (12 week post-baseline otherwise)</p>	Comparison	SMD (95% C.I.)	MCC (0.005µM) (Pre->Post)	0.57 (-0.67,1.80)	MCC (0.025µM) (Pre->Post)	0.37 (-0.85,1.58)	MCC (0.05µM) (Pre->Post)	0.58 (-0.66,1.81)	MCC (0.10µM) (Pre->Post)	0.58 (-0.65,1.82)	MCC (0.2µM) (Pre->Post)	0.54 (-0.69,1.77)	MCC (0.5µM) (Pre->Post)	-0.01 (-1.21,1.19)	MCC (1.0µM) (Pre->Post)	0.56 (-0.67,1.79)	MCC (0.005µM) (Pre->Ret)	-0.32 (-1.53,0.89)	MCC (0.025µM) (Pre->Ret)	0.81 (-0.46,2.07)	MCC (0.05µM) (Pre->Ret)	-0.02 (-1.22,1.18)	MCC (0.10µM) (Pre->Ret)	0.45 (-0.77,1.67)	MCC (0.2µM) (Pre->Ret)	-0.32 (-1.53,0.89)	MCC (0.5µM) (Pre->Ret)	0.34 (-0.88,1.55)	MCC (1.0µM) (Pre->Ret*)	0.71 (-0.54,1.96)	
Comparison	SMD (95% C.I.)																															
MCC (0.005µM) (Pre->Post)	0.57 (-0.67,1.80)																															
MCC (0.025µM) (Pre->Post)	0.37 (-0.85,1.58)																															
MCC (0.05µM) (Pre->Post)	0.58 (-0.66,1.81)																															
MCC (0.10µM) (Pre->Post)	0.58 (-0.65,1.82)																															
MCC (0.2µM) (Pre->Post)	0.54 (-0.69,1.77)																															
MCC (0.5µM) (Pre->Post)	-0.01 (-1.21,1.19)																															
MCC (1.0µM) (Pre->Post)	0.56 (-0.67,1.79)																															
MCC (0.005µM) (Pre->Ret)	-0.32 (-1.53,0.89)																															
MCC (0.025µM) (Pre->Ret)	0.81 (-0.46,2.07)																															
MCC (0.05µM) (Pre->Ret)	-0.02 (-1.22,1.18)																															
MCC (0.10µM) (Pre->Ret)	0.45 (-0.77,1.67)																															
MCC (0.2µM) (Pre->Ret)	-0.32 (-1.53,0.89)																															
MCC (0.5µM) (Pre->Ret)	0.34 (-0.88,1.55)																															
MCC (1.0µM) (Pre->Ret*)	0.71 (-0.54,1.96)																															
<p>Giannantoni et al. 2002</p> <p>Italy PEDro=6 RCT Level 1 N=23</p>	<p>Population: Refractory detrusor hyperreflexia.</p> <p>Treatment: Randomized two treatments</p> <p>a) single dose of 2 mM. capsaicin in 30 ml ethanol plus 70 ml 0.9% sodium chloride OR</p> <p>b) 100 mM. resiniferatoxin in 100 ml 0.9% sodium chloride.</p> <p>Outcome Measures: Urodynamics, frequency of daily catheterizations, incontinence episodes and side effects.</p>	<ol style="list-style-type: none">1. Capsaicin group showed no significant urodynamic or clinical improvements at 30 and 60 days.2. Resiniferatoxin group demonstrated significant urodynamic improvement at 30 and 60 days.3. Most patients receiving capsaicin, but none receiving resiniferatoxin developed AD, limb spasms, suprapubic discomfort and hematuria.																														

Author Year; Country Score Research Design Sample Size	Methods	Outcome																		
	<p>Effect Sizes: Forest plot of standardized mean differences (SMD ± 95%C.I.) as calculated from pre- to post-intervention data</p> <p style="text-align: center;">Giannantoni et al. 2002; Resiniferatoxin vs. Capsaicin (control)</p> <table><caption>Data from Forest Plot (Giannantoni et al. 2002)</caption><thead><tr><th>Outcome</th><th>SMD (95% C.I.)</th></tr></thead><tbody><tr><td>Mean uninhibited detrusor contraction threshold (30d)</td><td>0.76 (-0.09, 1.62)</td></tr><tr><td>Mean uninhibited detrusor contraction max amplitude (30d)</td><td>1.74 (0.85, 2.63)</td></tr><tr><td>Mean max bladder capacity (30d)</td><td>1.91 (1.02, 2.80)</td></tr><tr><td>Mean max bladder compliance (30d)</td><td>0.12 (-0.70, 0.94)</td></tr><tr><td>Mean uninhibited detrusor contraction threshold (60d)</td><td>0.76 (-0.09, 1.62)</td></tr><tr><td>Mean uninhibited detrusor contraction max amplitude (60d)</td><td>1.74 (0.85, 2.63)</td></tr><tr><td>Mean max bladder capacity (60d)</td><td>1.85 (0.96, 2.74)</td></tr><tr><td>Mean max bladder compliance (60d)</td><td>-0.16 (-0.98, 0.66)</td></tr></tbody></table> <p>Effet size calculated for 1) pre-intervention to 30 days (30d) post-intervention and 2) pre-intervention to 60 days (60d) post-intervention</p>		Outcome	SMD (95% C.I.)	Mean uninhibited detrusor contraction threshold (30d)	0.76 (-0.09, 1.62)	Mean uninhibited detrusor contraction max amplitude (30d)	1.74 (0.85, 2.63)	Mean max bladder capacity (30d)	1.91 (1.02, 2.80)	Mean max bladder compliance (30d)	0.12 (-0.70, 0.94)	Mean uninhibited detrusor contraction threshold (60d)	0.76 (-0.09, 1.62)	Mean uninhibited detrusor contraction max amplitude (60d)	1.74 (0.85, 2.63)	Mean max bladder capacity (60d)	1.85 (0.96, 2.74)	Mean max bladder compliance (60d)	-0.16 (-0.98, 0.66)
Outcome	SMD (95% C.I.)																			
Mean uninhibited detrusor contraction threshold (30d)	0.76 (-0.09, 1.62)																			
Mean uninhibited detrusor contraction max amplitude (30d)	1.74 (0.85, 2.63)																			
Mean max bladder capacity (30d)	1.91 (1.02, 2.80)																			
Mean max bladder compliance (30d)	0.12 (-0.70, 0.94)																			
Mean uninhibited detrusor contraction threshold (60d)	0.76 (-0.09, 1.62)																			
Mean uninhibited detrusor contraction max amplitude (60d)	1.74 (0.85, 2.63)																			
Mean max bladder capacity (60d)	1.85 (0.96, 2.74)																			
Mean max bladder compliance (60d)	-0.16 (-0.98, 0.66)																			
<p>Igawa et al. 2003</p> <p>Japan Pre-post Level 4 N=7</p>	<p>Population: 5 participants with cervical injuries and 2 participants with thoracic injuries.</p> <p>Treatment: bladder instillation with capsaicin solution under general anesthesia.</p> <p>Outcome Measures: blood pressure, heart rate, serum catecholamines, blood ethanol concentration.</p>	<ol style="list-style-type: none">1. Capsaicin attenuated elevated BP secondary to bladder distention (empty or full) post-treatment.2. In all individuals, episodes of AD become negligible and well tolerated > 3 months.																		

