

MULTIPLE INTRAVESICAL INSTILLATIONS OF LOW DOSE RESINIFERATOXIN IS EFFECTIVE IN TREATMENT OF DETRUSOR OVERACTIVITY REFRACTORY TO ANTICHOLINERGICS

Hypothesis / aims of study

Not all patients with refractory detrusor overactivity can be successfully treated by intravesical resiniferatoxin. In order to search for an effective and tolerable intravesical treatment, multiple intravesical instillations of resiniferatoxin at the concentrations of 10 nM were used.

Study design, materials and methods

A total of 53 patients with detrusor overactivity due to neurogenic (10), previous bladder outlet obstruction (20) or idiopathic etiology (23) refractory to anticholinergics were enrolled. They received 3 to 4 instillations of resiniferatoxin at concentrations of 10 nM at outpatient clinic. In all patients International Prostate symptom score and quality of life index were recorded and videourodynamic study were performed at baseline and 3 months after treatment. The therapeutic results and urodynamic parameters were compared among the patients with different etiology of detrusor overactivity.

Results

Four patients dropped out from the study after the first instillation due to urinary tract infection or severe miction pain, leaving 49 patients completed at least 3 instillations. The overall results showed an excellent result in 17 patients (34.7%), improved result in 13 (26.5%) and failed result in 19 (38.7%). Success rate was 80% in patients with previous bladder outlet obstruction, 59% in patients with idiopathic detrusor overactivity, and only 30% in patients with neurogenic detrusor overactivity ($p=0.011$). Patients showed significant improvement in storage symptom score, total symptom score and quality of life index after treatment. Cystometric capacity and postvoid residual showed significant increase and voiding efficiency significantly decreased after treatment. (Table) Detrusor overactivity during urodynamic study was absent in 12 patients after treatment.

		Neurogenic DO (n=10)	Bladder outlet obstruction(n=20)	Idiopathic DO (n=19)	Total patients (n= 49)
Bladder capacity	A	272.5 ± 138.2	246.6 ± 136.9	248.9 ± 119.8	252.4 ± 128.0
	B	294.9 ± 140.9	296.4 ± 127.3	318.0 ± 172.2	304.3 ± 145.2
	P value	0.616	0.072	0.058	0.008
Qmax	A	13.8 ± 5.26	9.17 ± 4.36	12.9 ± 6.75	11.5 ± 5.78
	B	11.9 ± 6.73	9.72 ± 4.83	11.6 ± 5.49	10.9 ± 5.43
	P value	0.376	0.554	0.402	0.442
Pdet.Qmax	A	30.0 ± 7.91	32.1 ± 19.0	20.6 ± 8.73	27.3 ± 15.0
	B	16.8 ± 8.23	25.7 ± 12.8	20.2 ± 10.4	22.2 ± 11.5
	P value	0.088	0.191	0.892	0.060
PVR	A	58.8 ± 79.5	33.9 ± 44.9	17.5 ± 30.2	32.4 ± 49.8
	B	81.3 ± 95.1	51.7 ± 59.1	89.1 ± 123.2	71.6 ± 94.1
	P value	0.666	0.321	0.041	0.027
Voiding efficiency	A				
	B	78.4 ± 17.1	87.5 ± 16.7	91.9 ± 13.0	87.6 ± 15.8
	P value	74.4 ± 26.3	82.5 ± 20.4	73.9 ± 28.4	77.7 ± 24.6
		0.738	0.379	0.027	0.027

Interpretation of results

The results of this study show that multiple intravesical instillations of resiniferatoxin at the concentrations of 10 nM have satisfactory therapeutic tolerability and outcome in treating patients with detrusor overactivity refractory to anticholinergics. The therapeutic results are slightly better than that in the patients receiving single instillation of 100 nM resiniferatoxin as in previously report. Among the patient groups, patients with previous bladder outlet obstruction have the best therapeutic results.

Concluding message

Multiple intravesical instillations of resiniferatoxin at the concentrations of 10 nM are effective in treating patients with detrusor overactivity refractory to anticholinergics. The therapeutic outcome is satisfactory and slightly better than single instillation of resiniferatoxin at the concentrations of 100 nM.