

BOTULINUM A TOXIN (BOTOX) INJECTION FOR THE TREATMENT OF REFRACTORY OVERACTIVE BLADDER**Hypothesis / aims of study**

Botox injections in the detrusor muscle may reduce involuntary contractions that cause urgency, frequency, and urge incontinence. We present the results of a pilot study with Botox injection for the treatment of refractory overactive bladder (OAB).

Study design, materials and methods

This is a retrospective study of 18 patients with refractory OAB who had been injected with Botox (300 U Botox were injected under cystoscopic visualization to 30 sites in the detrusor muscle). Prior to the injection 100 ml Lidocaine 2% was instilled in the bladder for 15 min. Patients completed a voiding diary, bladder perception (OABq) and QOL questionnaires (UDI6 and IIQ7) before injection and at 3 and 6 months after the injection.

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Results

18 patients completed 3-months follow-up, while 9 patients completed 6-months follow-up.

- The average number of frequency episodes (F) was 10.7 at the baseline visit, 8.8 (P=0.01) at 3 m, and 10.3 (P=0.06) at 6 m.
- The average number of leakage episodes (L) was 4.2 at the baseline visit, 2.5 (P=0.01) at 3 m, and at 2.5 (P=0.46) 6 m.
- The average number of Urgency (U) was 6 at the baseline visit, 4 (P=0.08) at 3 m, and 4.2 (P=0.23) at 6 m.
- The average score of Bladder Perception (BP) was 3.6 at the baseline visit, 2.5 (P=0.001) at 3 m, and 2.4 (P=0.02) at 6 m.
- The average score of IIQ-7 was 14.8 at the baseline visit, 10.4 (P=0.01) at 3 m, and 11 (P=0.1) at 6 m.
- The average score of UDI-6 was 10 at the baseline visit, 8.1 (P=0.23) at 3 m, and 8.7 (P=0.2) at 6 m.

No short or long-term complications were noted.

	Baseline	3 month follow-up			6month follow-up		
			Mean % changes	P-value		Mean % changes	P-value
F	10.7	8.8	17.7	0.01	10.3	3.7	0.06
L	4.2	2.5	40.4	0.01	2.5	40.4	0.46
U	6.0	4.0	33.3	0.08	4.2	30.0	0.23
BP	3.6	2.5	30.5	0.001	2.4	33.3	0.02
IIQ7	14.8	10.4	29.7	0.01	11	25.7	0.1
UDI6	10.0	8.1	19.0	0.23	8.7	13.0	0.2

Interpretation of results

At a 3-month follow-up, there is improvement in most outcomes of 20-40%, which is statistically significance. At 6-months follow-up, the improvement is not as durable. While outcomes in voiding dysfunction for neurogenic causes of refractory OAB appear to be better than what we have reported in this series of non-neurogenic refractory OAB, a dysfunctional acetylcholine axes may not be the major cause of their bladder dysfunction.

Concluding message

Botulinum A Toxin injection in the detrusor muscle is effective and safe for the treatment of refractory OAB. A multi-centre prospective trial with long-term follow-up may be designed with a power calculation based on these results.