

Subtrigonal Botulinu toxin-A (BoNT-A) therapy for female patients with OAB combined with urethral instability

Results of a pilot study

Hypothesis / aims study

We report the results of a pilot study performed in 5 patients with overactive bladder syndrome (OAB), combined with urethral instability, whom we treated with subtrigonal BoNT-A injections. In the past good results were obtained with surgical partial bladder denervation. We hypothesized that patients with OAB combined with urethra instability could benefit from chemical denervation by subtrigonal BoNT-A injections

Study design, material and methods

Retrospective description of the pilot performed in 5 female patients. Four patients had a long history of refractory idiopathic OAB, in one patient the main complaint was painful bladder. In all patients, urethral pressure variations (UI) were observed during filling cystometry of urodynamic evaluation. In the past, surgical denervation was performed after a positive test with subtrigonal injections of lidocaine. Therefore, we started treatment with 10cc lidocaine 1% subtrigonal. If OAB symptoms improved with >50% after these injections, treatment was continued with subtrigonal injections BoNT-A, 100 IE in 10ml saline solution.

Results

	Capacity (ml)	FSF (ml)	DO	UI	Effect BoNT-A
Patient 1 Pre BoNT-A Post BoNT-A	216 478	n.a. 278	No no	>40cmH2O no	Positive
Patient 2 Pre BoNT-A Post BoNT-A	407 687	199 613	no no	>40cmH2O Max 20 cm H2O	Positive
Patient 3 Pre BoNT-A Post BoNT-A	329 363	64 200	no no	>40cmH2O Max 20 cm H2O	Positive
Patient 4 Pre BoNT-A Post BoNT-A	337 n.a.	116 n.a.	no no	>40cmH2O	Positive
Patient 5 Pre BoNT-A Post BoNT-A	730 n.a.	113 n.a.	no no	>40cmH2O	Negative
Average Pre BoNT-A Post BoNT-A	403 509	123 363			

Interpretation of results

Four out of five patients – all patients with refractory OAB as main complaint- had a positive response to treatment with subtrigonal BoNT-A injections. The most remarkable change was the improvement of first sensation of filling (FSF). This implies that subtrigonal BoNT-A treatment probably reduces sensory afferent input.

Concluding message

Chemical denervation by subtrigonal BoNT-A injections resulted in improvement of symptoms in patients with OAB combined with urethral instability. Further research is necessary to define the condition of UI in patients with OAB and to explore new treatment modalities like chemical denervation with subtrigonal BoNT-A injections