#110 Could we use less injection sites of onabotulinumtoxinA in re-treatments with the same efficacy? Preliminary results of a pilot study

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Hypothesis / Aims of study

OnabotulinumtoxinA (BTX) is used in the treatment of neurogenic (NDO) and idiophatic detrusor overactivity (IDO). In a recent study [1],similar efficacy and rates of adverse events were found using 1 to 3 injection sites, compared with standard technique (20-30 injection sites), in naïve NDO and IDO patients. Our purpose was to determine if re-treatment using less injections points, provides similar clinical efficacy, duration and adverse events compared with previous treatment

Study design, materials and methods

This is a prospective, interventional, before and after, single center study. From January 2016 to March 2017, 34 NDO and IDO patients refractory to oral medication were included. Only patients who had been previously treated with BTX according to standard technique (20-30 puncture sites) and showed good clinical response were included. At the moment patients requested for repeating procedure, they were treated with the same BTX dose, but with three to four intradetrusor injection sites in retrotrigone region, depending on dose required. BTX injection was performed under local anesthesia or spinal anesthesia as an outpatient procedure. Pain during the procedure was evaluated using a visual analogue scale (score 0 to 10). Efficacy was measured using the Treatment Benefit Scale (TBS), and continence evaluated with bladder diaries and personal interview. Duration of effect was determined by patient reported return of symptoms and/or need of introducing additional oral drug treatment. Adverse events were reported.

Results

We report the results of 15 patients with a mean follow up of 37 weeks,(24-52). Demographic characteristics are reported in table I. All the patients were incontinent. Procedure characteristics, clinical outcomes and adverse events are listed in table II. Mean duration of effect was 29 weeks, compared with 36 weeks of previous procedure with no significant differences (p=0,157). No differences in efficacy, duration of effect and adverse events were found among IDO and NDO patients.

	All patients	IDO	NDO
N (%)	15	9 (60)	6 (40)
Age (mean, SD)	58,7 (14,7)	62,7 (12,6)	52,6 (16,6)
Female (%)	13 (87)	8 (89)	5 (83)
CIC (%)	5 (33,3)	0	5 (100)
Etiology NB (%)			
Spinal Cord Injury			2 (33)
Multiple Sclerosis			2 (33)
Spina Bifida			1 (17)

Table I. Demographic characteristics. CIC (Clean Intermittent Catheterization). NB (Neurogenic Bladder)

Anesthesia (%)	
Local	14 (93)
Spinal	1 (7)
BTX dosage (%)	
100 U	8 (53,3)
150 U	2 (13,3)
200 U	3 (20)
300 U	2 (13,3)
VAS pain (mean, SD)	2,6 (1,7)
TBS (%)	
1 (greatly improved)	6 (40%)
2 (improved)	7 (47%)
3 (not changed)	2 (13%)
Dry rate	12 (80%)
UTI	2 (13,3%)

Table II. Procedure characteristics, clinical outcomes and adverse events. UTI (Urinary Tract Infection)

Conclusions

In this small pilot study on repeated treatments with BTX in IDO and NDO patients, we have found similar clinical efficacy and duration of effect using less puncture sites (3-4), compared to previous treatments using standard technique (20-30 puncture sites).
We consider that treatment of BTX using three to four injections, may be an interesting option, with limited and expected adverse events. More studies are needed to confirm these findings

1. Avallone MA, Sack BS, El-Arabi A, Guralnick ML, O'Connor RC. Less Is More-A pilot study evaluating one to three intradetrusor sites for injection of OnabotulinumtoxinA for neurogenic and idiopathic detrusor overactivity. Neurourol Urodyn 2017 Apr;36(4):1104-7