

# The efficiency of Botulinum toxin in treatment of overactive bladder in patients with myofascial pain syndrome of the pelvic floor.

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## INTRODUCTION:

1. Some myofascial syndromes (MFS) of striated pelvic floor muscles can induce such symptoms as frequent urination, urgent urination, nocturia. The same symptoms are inherent symptoms of overactive bladder (OAB).
2. Reason of some OAB cases can be MFS (spasticity) of pelvic floor muscles (m.levator ani, m.obturatorius int., urethral sphincter).
3. Relaxation of spastic muscles with Dysport injections can cure OAB symptoms

## METHODS:

50 female patients aged from 21 to 45 years (average 29.8±6.8) participated in the study. All of them had chronic pain syndrome of the pelvic floor and urge incontinence. Results of bacteria culture and PCR studies were negative. All participants completed a voiding diary. Cystometry was performed in all the patients. Furthermore, we evaluated the tone of levator ani muscles with vaginal manometry. Pelvic floor muscles (m.levator ani, m.obturatorius internus, urethral sphincter) were evaluated by palpation while muscle tone was estimated according to Lamont scale (0-5 points).

**BOTOX injection into m.levator ani with Stimuplex needle and electrical stim with 2Hz frequency:**

- 100 Units



It was observed that all participants had trigger points in m.levator ani, m.obturatorius internus, urethral sphincter and patients were offered BoNT/A (Dysport) injections into the pelvic floor muscles with Stimuplex needle and electric stimulation at 2 Hz frequency.

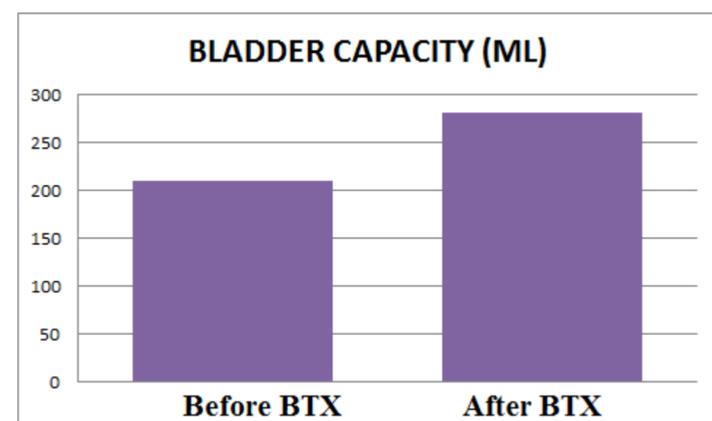
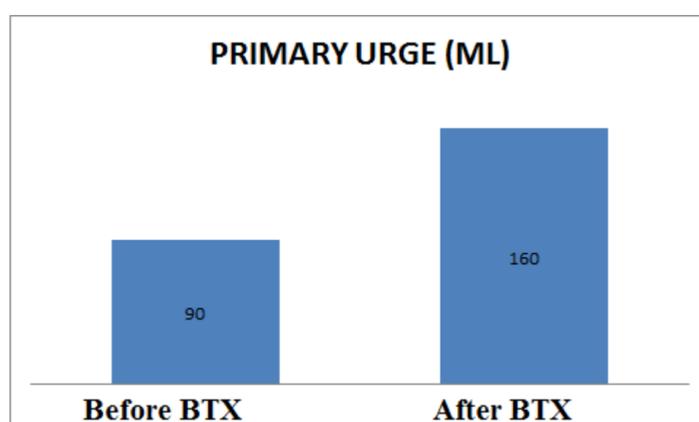
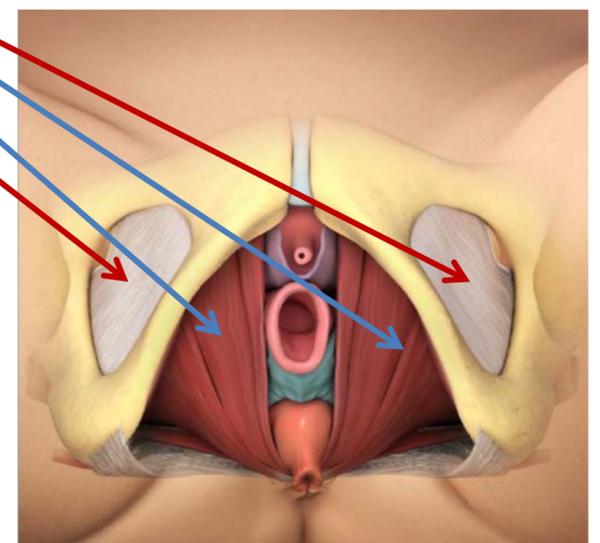
The dose of BoNT/A was determined by the degree of muscle tone corresponding with Lamont scale (averagely 150 – 300 units of BoNT/A ). Injections into bladder trigonum was performed using flexible needle through a cystoscope. Results of clinical study were estimated after 3 months, 6 months and 12 months of treatment with BoNT/A respectively.

## RESULTS

According to the voiding diary before the treatment, patients reported 15 - 45 bladder voiding per day (averagely 25 times) versus 8 - 20 bladder voiding per day (averagely 14 times) after treatment with BoNT/A injections.

The results of cystometry before and after treatment accordingly was: Vaginal Pressure 93.26 (75-104 mm Hg) and 64.06 (55-75 mm Hg); the primary urge of 90 ml (80-105 ml) and 160 ml (140-180 ml); Maximum cystometric capacity was 210 ml (180-250 ml) and 280 ml (210- 350 ml).

Average muscle tone (Lamont scale) before the treatment was: m. levator ani left 2,13; right 2,06; m.obt.int. left 0,73; right 0,93; urethra 1,06; bladder trigonum area 2,13 and after treatment m. levator ani left 0,46; right 0,46; m.obt.int. left 0,13; right 0,26; urethra 0; bladder trigonum area 0,73.



## CONCLUSIONS:

Clinical study showed, that there is an increase in bladder capacity. The amount of urination during the day decreased and approached normal values. Pelvic floor pain syndrome was significantly reduced or eliminated with the use of high doses of BoNT/A. Mechanism of effectiveness of BoNT/A is by blockade of neurotransmitters, release and suburothelial sensory receptors expression, For patients with refractory OAB, BoNT/A offers an effective treatment option and the adverse events were primarily localized to the lower urinary tract.