

751

Mirkin Y¹, Bedretdinova D¹, Eizenakh I¹, Smirnov G¹, Romikh V²

1. *NMTC International*, 2. *Central Institute of Urology*

INTRAVESICAL ELECTROMOTIVE BOTULINUM TOXIN ADMINISTRATION – NEW APPROACH OF OAB AND BPS TREATMENT

Hypothesis / aims of study.

During more than 15 years, injections of botulinum toxin into detrusor, used for overactive bladder and bladder pain syndrome's treatment [1,2]. Disadvantages of this method: invasiveness, general anaesthesia, patients' fearing. On this reason, we decided to conduct this study. Electromotive drug administration is widely used method of local drugs administration. Molecule of botulinum toxin A (BOTOX) is too heavy (900 kDa) but incobotulinumtoxinA (Xeomin) molecular weight is only 150 kDa. The aim of our study – evaluate the possibility of electromotive Xeomin administration.

Study design, materials and methods

We've evaluated mobility molecules of incobotulinumtoxinA in special device for analytical electrophoresis. There were eleven samples with pH: 5.0; 5.4; 5.8; 6.2; 6.6; 7.0; 7.4; 7.8; 8.2; 8.7; 9.0

Distilled water was used as dissolvent with 0.1N HCl or NaOH.

Electric power was 50 Watt.

Results

Maximal mobility was in sample with pH 5.4, from anode. There was the solution: 100 U incobotulinumtoxinA, 10 ml distilled water with 100 mcl 0.1 N HCl and 1 ml DMSO

Interpretation of results

Our in vitro experiment has demonstrated possibility of electromotive incobotulinumtoxinA administration. We've developed solution for this procedure: 100 U of Xeomin dissolve in 10 ml distilled water with 100 mcl 0.1 N HCl and 1 ml DMSO.

Concluding message

There is a possibility, that intravesical electromotive incobotulinumtoxinA administration through special catheter-electrode can be used for treatment of OAB and BPS after randomized clinical trials.

References

1. Botulinum toxin a has antinociceptive effects in treating interstitial cystitis. Smith CP, Radziszewski P, Borkowski A, Somogyi GT, Boone TB, Chancellor MB.
2. Botulinum A toxin intravesical injections in the treatment of painful bladder syndrome: a pilot study. Giannantoni A, Costantini E, Di Stasi SM, Tascini MC, Bini V, Porena M.

Disclosures

Funding: NMTC International **Clinical Trial:** No **Subjects:** NONE