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**Title:** TRIGONUM AND BLADDER BASE INJECTION OF BOTULINUMTOXIN A (BTX) IN PATIENTS WITH SEVERE URGENCY-FREQUENCY-SYNDROME REFRACTORY TO CONSERVATIVE MEDICAL TREATMENT AND ELECTRICAL STIMULATION

### **Aims of Study:**

Urgency and frequency are a primary indication for medical treatment and in some cases an indication for sacral neurostimulation. In most cases this works out. However there are patients, who do not respond to different anticholinergic and spasmolytic drugs and combination therapy. Another therapeutic option is sacral nerve stimulation (SNS). Some patients will benefit from uni- or bilateral sacral neuromodulation. We report on 7 patients who did not respond to drugs/ SNS and underwent therefore BTX-injection into the bladder trigone and bladder base.

### **Methods:**

Seven female patients (mean age 52 (48 - 67 years) suffering from severe urgency and frequency symptoms underwent a complete neuro-urological work-up. All patients had a history of treatment for 3 to 12 years, visiting a variety of clinics and using different drugs alone and in combination. All patients had at least two unsuccessful SNS-trials in our unit. The micturition diary revealed a baseline mean frequency of 23, a maximum frequency of up to 35 voids per 24 hours. The bladder capacity was determined by diary, uroflowmetry and cystometry. The mean maximum bladder capacity was 120 (65 to 190) ml.

A BTX-injection was offered to all patients after failure of drug treatment and SNS before considering bladder augmentation. In analgosedation the injection was performed using a cystoscope and a Bard® injection needle. At five to seven different points in the trigone and bladder base area 50, 100 or 200 units of BTX (Botox®, Allergan) were injected. A catheter was inserted for one night. All women were followed for symptom change 2, 4, 8, 16 weeks and six months after injection.

### **Results:**

The BTX-treatment was completed in all seven patients without complications. After injection four patients reported an improvement of symptoms. Frequency was reduced to 12 voids per 24 hours, the bladder capacity was markedly increased (250 to 320 ml). The improvement lasted for 8 to 20 weeks. Residual urine was not observed. There was also a minor improvement of the pain level associated to the bladder dysfunction. Three patients did not respond at all. Augmentation cystoplasty was performed.

### **Conclusions:**

BTX-injection may be an treatment option for some patients refractory to medical treatment and SNS for severe urgency and frequency. However further studies are needed to optimize the treatment protocol (doses, injection points, ..) and to evaluate long-term treatment results.

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None