

## LONG TERM FOLLOW UP AFTER BOTILINUM TOXIN-A ( BTX-A) INJECTION INTO THE DETRUSOR FOR TREATMENT OF NEUROGENIC DETRUSORHYPERACTIVITY IN CHILDREN

### Hypothesis / aims of study

To prove the long term efficacy of BTX-A injection in the management of children with neurogenic detrusorhyperactivity.

### Study design, materials and methods

28 children out of 145 with neurogenic bladder (15 male and 13 female, mean age 10,7) ,who were treated between 2002 and 2010 and became non-responders to conservative treatment (orally and intravesically administered anticholinergics, CIC) were included into the retrospective study. Pre- and post-treatment assessment included a video-urodynamic study and an incontinence score. We injected 10-12 U/ Kg of BTX-A (Botox ®) into the detrusor at 20-30 sites, sparing the trigone. In group I 14 patients had a single injection of BTX-A, whereas in group II another 14 patients had repeated (mean 2.5) injections of BTX-A with a mean interval of 13,7 months. The follow up is mean 47.3 months (range 6-84 months)

### Results

Group I: mean bladder reflex volume increased (62.9 to 117.5 ml), maximum detrusor pressure decreased (59 to 37. 5 cm H2O), detrusor compliance increased

(4.8 to 9.5 ml / cm H2O), leak-point-pressure (LPP) decreased (46.5 to 24.2 cm H2O) Five patients did well after one injection und stay stable under adjuvant anticholinergics. Four patients became an ileocystoplasty and rectus fascial sling procedure due to persistent low-compliance bladder and incontinence. Five patients from abroad were lost of long term follow up.

Group II: urodynamic parameters of the first und last injection were similar to those obtained in Group I in thirteen patients, who showed also a good clinical response. Only one patient received an ileocystoplasty.

### Concluding message

BTX-A is a safe alternative in the treatment of detrusor hyperactivity in MMC children. The efficacy lasted a mean of 12 months and urodynamic response is unchanged even after several injections. In our series 21.7 % of children were non-responders. Patients with severe resistant fixed low-compliance bladder with high LLP and vesicoureteral reflux are non-responders either to standard conservative treatment or Botox Injection. Bladderaugmentation is still the ultima ratio in these patients.

<b><i>Specify source of funding or grant</i></b>	<b>No</b>
<b><i>Is this a clinical trial?</i></b>	<b>Yes</b>
<b><i>Is this study registered in a public clinical trials registry?</i></b>	<b>No</b>
<b><i>Is this a Randomised Controlled Trial (RCT)?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>Retrospective analysis</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>Yes</b>