

## **STATUS QUO OF BOTULINUM TOXIN-A IN MMC-CHILDREN: COMPARISON WITH OPEN SURGICAL PROCEDURES**

### **Aims of Study**

The efficiency of botulinum toxin-A injection (Dysport) in children with spina bifida and neurogenic bladder dysfunction with hyperreflexia of the detrusor vesicae muscle is proven. Considering the injection therapy as a borderline concept between failure of conservative pharmacological treatment and open surgical procedures, data is missing comparing operated children with bladder augmentation or urinary diversions to patients treated with botulinum toxin-A relating to indication, problems, outcome and overall satisfaction. What happened to operated children in the "botulinum toxin-A era?"

### **Methods**

Basic studies were standardised urodynamic examination according to ICS criteria in children with meningomyeloceles and neurogenic bladder dysfunction. Basic therapy was clean intermittent catheterization (Cic) with a non conservatively treatable hyperreflexia of the detrusor muscle. Severe indications for a low compliance situation of the bladder were vesico-uretero-renal reflux and recurrent urinary tract infections with leucocyturia and clinical infection signs, radiomorphological signs of secondary damages of the lower urinary tract and urinary incontinence. Renal function by blood analysis and renal scintigraphy were measured before and after interventions. A quality of life questionnaire was established. We included 35 children with the injection therapy and 15 patients with bladder augmentation or urinary diversion.

### **Results**

The results of the injection therapy were documented by videourodynamics before operation, two weeks after operation and a further follow up of 2,4 and 6 months. In all cases good results were found with an almost complete suppression of the hyperreflexic detrusor muscle activity. Children undergoing open surgical procedures reported of initial problems with indwelling catheters and a long period of convalescence. There were no severe complications in operated children.

### **Conclusions**

The botulinum toxin-A injection is a practicable procedure and a good therapeutic option for the treatment of hyperreflexic bladder disorders. Parents decision to undergo immediate open surgery was mainly caused by continous incontinence situation. For mmc-children that have chronic and lifelong neurogenic bladder situation open surgery ist still a valid option. There are more studies to be done to identify dosis escalations and long term results to establish the value of botulinum toxin-A injections.