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BOTULINUM TOXIN A INJECTION IN THE M. DETRUSOR VESICAE REPLACES SURGERY IN CHILDREN WITH MYELOMENINGOCELE

Synopsis of Video

Botulinum Toxin A (BTxA) is used widespread in neurology and plastic surgery with very good results. Some groups used BTxA for the treatment of detrusor hyperreflexia in spinal cord injury. We propose BTxA in children with incomplete spinal lesion and detrusor hyperreflexia refractory to anticholinergic medication, where bladder augmentation is the only alternative.
We enrolled 31 children with a mean age of 9.5 a (2.3-17.3) from 10/1999 to 09/2002.
All patients had intolerable detrusor pressure over 40 cmH_2O due to myelomeningocele (n=30) or spinal meningeoma (n=1), although they were on combined intravesical and oral anticholinergics. All patients used clean intermittent catheterization (CIC). BTxA injection was carried out under general anesthesia in a latex-free environment using a 21G Chiba needle to do the injections cystoscopically. We used 5-10 IE BTxA (Botox®, Merz & Co., GmbH & Co, Dysport®, Ipsen Pharma, Germany) ad 0,1ml NaCl per injection site at a total of 150 – 300 IU. The injections were distributed all over the bladder excluding the trigone.

Results

With a median follow-up of 14.5 months we determined that BTxA needs 6 weeks before relevant urodynamic changes can be seen. Intravesical Pressure could be reduced for a mean of 9.26 months (6 mo. – 1.25 years) with repeated injections seeming to prolong the action time of the toxin. In 4 cases BTxA toxin had to be reinjected within 3 months. In 5 cases anticholinergic medication could be stopped, in 5 more cases anticholinergic treatment could be reduced. We had no complications intra- and postoperatively, and no side effects were seen. In 30 children surgery was avoided until now. Only one patient did not respond to the treatment and bladder augmentation had to be performed at last.

Conclusions

We show how the BTxA Injection is performed in our setting to achieve these excellent results of long term efficacy with significantly improved urodynamic situation. The minimally invasive procedure had no side effects. In some case we confirmed BTxA as an alternative to anticholinergic medication. Thus we proofed that BTxA injection in the M. detrusor vesicae is a safe and efficient alternative to surgery.