

BOTULINUM TOXIN INTO THE TRIGONE IN NEUROGENIC OVERACTIVE BLADDER NON RESPONDER TO DETRUSOR INJECTION

Hypothesis / aims of study

Botulinum toxin infiltration into detrusor muscle (BTX-D) represents a choice of treatment when antimuscarinics fails in neurogenic overactive bladder (NOAB) to obtain low pressure reservoir and continence. The "hystorical" procedure is done via cystoscopy, sparing the trigone to avoid incontinence and vesico-ureteral reflux. Despite the high success rate a low percentage of patients obtain short time results. We assessed a group of patients with short response to injection both into detrusor muscle and into the trigone.

Study design, materials and methods

A database collected information of 240 patients treated from September 2004 and December 2006. All patients had a neurogenic overactive bladder, non responder to antimuscarinic treatment and chronic neurostimulation in incomplete lesions, 142 patients had post traumatic injury of the spinal cord, while 98 had a NOAB secondary to viral myelopathy, vascular diseases, spina bifida and multiple sclerosis. All patients stopped the ongoing antimuscarinic treatment 2 weeks before. All patients were submitted to infiltration with Dysport 750 U with dilution in 10 ml. using 20 sites of infiltration into the detrusor. Data were collected with bladder diary, filled in at baseline and during the following control visits, on day 30 and, subsequently every 3 months. At reappearance of symptoms, before a possible further infiltration, a control by cystomanometry was performed. In the 30 days after infiltration, all patients received antimuscarinics stepping down till the minimum effective dose. Mean time of continence between self catheterization was 10 months. Six patients with a short term response, less than one month, were re-treated with the same dosage, after three months from the first injection, both into the detrusor and into the trigone: the dose of infiltration into the trigone was 250 U.

Results

All patient submitted to trigonal area injection became continent after one week. Despite previous results, at the first injection, at 12 and 18 weeks the maintained the effect of treatment with continence and low bladder pressure. No stress incontinence or vesico-ureteral reflux was noted at vyeourodynamic.

Interpretation of results

Trigonal area represent a possible target to treat detrusor overactivity. The injection of botulinum toxin seems to be not related on side effects on closure mechanism or vesico-ureteral reflux. Before introduction of botulinum toxin to treat NOAB, bladder augmentation was a choice when antimuscarinics failed, but sometimes the procedure, was not sufficient to obtain a complete resolution of bladder overactivity. This consideration can be related on the role of trigonal area as a specific trigger for detrusor overactivity. From introduction of the use of botulinum toxin to avoid detrusor uninhibited contraction, main authors avoid trigone infiltration. Data collected are preliminary and a study design on this preliminary experience is in progress to compare detrusor only, trigonal only, and both infiltration.

Concluding message

Preliminary results open a discussion on the right site for infiltration of botulinum toxin to treat neurogenic and also idiopathic overactive bladder. Infiltration of trigonal area is safe with better efficacy in patients with a short response to infiltration in the detrusor muscle. Further experience is necessary.

References

Karsenty G J Urol 2007, 177 (3): 1011-4

FUNDING: no grant

HUMAN SUBJECTS: This study did not need ethical approval because consent of the patient by the Italian law but followed the Declaration of Helsinki Informed consent was obtained from the patients.

