

BOTULINUM TOXIN A (BOTOX) IN THE TREATMENT OF NONNEUROGENIC DETRUSOR OVERACTIVITY INCONTINENCE

Hypothesis / aims of study

Patients suffering from detrusor overactivity incontinence frequently improve significantly following treatment with conventional oral medication, yet a small number of patients has no effect of the treatment, or must stop treatment due to severe side effects. During recent years botulinum toxin A (Botox) (BTA) has been introduced in treatment of neurogenic detrusor overactivity, and results have been promising [1]. The aim of the present study was to evaluate the efficacy of intravesical BTA treatment in a series of persons suffering from incontinence caused by detrusor overactivity without apparent neurogenic aetiology.

Study design, materials and methods

Eight persons (7 women and 1 man) aged 31 to 73 years (median, 56 years) were included. All suffered from detrusor overactivity incontinence even though treated with high dose tolterodine. The majority had also been treated intravesical instillation of oxybutynin. The amount of urine lost during incontinence episodes was quantified within a week before treatment by means of 24-hours pad test. Filling cystometry was performed less than 3 months before treatment and maximum bladder capacity and maximum detrusor pressure during filling were determined. Estimation of urine loss and cystometry were repeated 6 weeks after treatment.

At treatment a total of 300 IU of Botox was injected cystoscopically into the detrusor muscle at 30 locations excluding the trigone.

Results

Seven of 8 patients (88%) reported to be fully continent within 2 weeks after treatment, and the volume leaked in the remaining incontinent patients was reduced from 660 to 50 ml/day. All had stopped anticholinergic medication. The maximum detrusor pressure during filling was significantly reduced, and the maximum bladder capacity was increased in all but one patient (Table 1). The period the patients remained continent following treatment ranged from 4 to 7 months (median, 6 months). No side effects were observed.

Table 1.

	Before BTA injection	After BTA injection
Incontinence (n)	8 (100%)	1 (12%) *
Leaked volume (ml/d)	220 (60-660)	0 (0-50) **
P _{det} -max (cm H ₂ O)	40 (30-74)	14 (7-21) **
Vol _{max} (ml)	113 (22-422)	331 (60-421) **

*) p<0.02, McNemar; **) p<0.02, Wilcoxon

Concluding message

The present study confirms that BTA is highly effective in the treatment of detrusor overactivity incontinence. The duration of the BTA effect as evaluated by cystometry has previously been reported to be up to approximately 12 months in patients suffering from neurogenic detrusor overactivity [2], however when looking at continence/incontinence – which is highly important for the patients' quality of life – the present results indicate that more frequent therapy is probably necessary in order to retain total continence.

References

1. Reitz A, Stöhrer M, Kramer G et al. European experience of 200 cases treated with Botulinum-A toxin injections into the detrusor muscle for neurogenic incontinence. Eur Urol 2003;suppl. 2:140.
2. Staehler M, Sauter T, Miller K. Long term results proof Botulinum toxin A injection in the m. detrusor vesicae to be an alternative to surgery in children with myelomeningocele. Eur Urol 2003;suppl. 2:140.

