

SUCCESSFUL BLADDER BOTULINUM TOXIN INJECTION TO TREAT REFRACTORY OVERACTIVE BLADDER

Aims of Study

We investigated the efficacy of botulinum toxin A as a method of management of refractory idiopathic overactive bladder (OAB) in 20 patients and compared these results with 20 patients diagnosed with neurogenic detrusor hyperreflexia. Botulinum toxin injections were administered to the bladder base and trigone.

Methods

Twenty patients referred to our tertiary clinic with refractory OAB (5 men, 15 women mean age 63.2 range 30-78) and 20 patients with neurogenic detrusor hyperreflexia (3 men, 17 women) with mean age of 47.4 (range 24-83) were studied. During the outpatient procedure 200 units of botulinum toxin A were diluted in 20 ml sterile saline. Botulinum toxin was injected into the bladder base and trigone at 20 sites during cystoscopy using a 23-gauge injection needle. Procedures were performed under light sedation.

Results

Preoperatively, all patients had evidence of involuntary detrusor contractions during video urodynamic testing. Diaries preoperatively indicated voiding or incontinent episodes of up to every 30 minutes. Mean bladder capacity of OAB patients was 162±32 ml and detrusor hyperreflexia was 144±40 ml. We injected botulinum toxin throughout the bladder, including the bladder base and trigone. This technique was not associated with any adverse event. No short or long term local or systemic effects including pyelonephritis or flank pain were observed postoperatively. None of the patients developed urinary retention. After injection, 76% of OAB patients indicate a decrease in voiding frequency and decrease or absence of incontinence validated by diaries compared to 72% of neurogenic patients. Residual urine did not significantly increase in either the OAB (12±30 ml pre and 32±21 ml post) or neurogenic group (42±33 ml pre and 51±29 ml post). The onset of action of bladder botulinum toxin is typically one week and maximal effect was seen in one month. Patients indicate that effects have lasted as long as 6 months and follow-up of these patients continues.

Conclusions

Botulinum toxin injections should be considered as a treatment for not only detrusor hyperreflexia but also idiopathic OAB. Efficacy appears to be similar between the two groups. Improvement is evidenced by increased functional capacity and decreased urge incontinence without urinary retention. Injection of up to 200U of botulinum A toxin in to the bladder base can improve voiding and sleeping patterns without causing retention or reflux.