



Letter to the Editor

Re: Athanassios Oeconomou, Helmut Madersbacher, Gustav Kiss, Thomas J. Berger, Michael Melekos and Peter Rehder. Is Botulinum Neurotoxin Type A (BoNT-A) a Novel Therapy for Lower Urinary Tract Symptoms Due to Benign Prostatic Enlargement? A Review of the Literature. Eur Urol 2008;54:765–77

We read with great interest the review on botulinum neurotoxin (BoNT) treatment for lower urinary tract symptoms (LUTS) by Drs Oeconomou and coworkers [1]. The basic organization of this report is clear and convincing, and the associated conclusions and recommendations are based on a review of the world literature by investigators with long-standing interest in lower urinary tract disorders. This paper confirms that the management of benign prostatic enlargement (BPE) has undergone extensive reevaluation during the past few years based on therapeutic improvements in this field that are accurately examined in the report [1].

Nevertheless, in the conclusions, the authors state that the results of the clinical studies are encouraging for the further use of BoNT in the treatment of LUTS due to BPE that is refractory to medical treatment. Moreover, the authors state that further controlled studies with longer follow-up are needed to evaluate the potential of BoNT treatment. We have recently conducted an open-label study of BoNT in men with LUTS due to BPE who no longer respond favourably to medication and who refused to undergo surgical treatment [2]. Seventy-seven patients were treated. All patients received 200 U of BoNT. Neither systemic complications nor local complications occurred after BoNT injection. At the 1-mo evaluation, 41 patients had subjective symptomatic relief. At the 2-mo evaluation, 55 patients reported subjective symptomatic relief. Considering that the goal of therapy is to relieve LUTS, the efficacy of any symptomatic BPE treatment is determined primarily by the magnitude of the change in patients' symptoms and improvement in urinary flow rate. Intraprostatic injection therapy for benign prostatic hyperplasia is an inexpensive and simple procedure [3]. BoNT treatment attenuates LUTS in men with BPE and with various sizes of prostate [4]. In the present study, the benefit of BoNT

treatment was evident starting at the first month after treatment and continuing throughout the follow-up period. At the 30-mo evaluation, all 77 patients continued to have a good voiding condition [2].

Actually, a decrease in American Urological Association Symptom Index (AUA-SI) and improvement of peak urinary flow rate have been documented after BoNT injection: At the 2-mo evaluation, AUA-SI score decreased and mean peak urinary flow rate significantly improved as compared with baseline values. Furthermore, at the same time, a decrease of the mean residual urinary volume (no residual volume in 15 patients at ultrasonography) [2] and reduction in prostate volume, documented by both transrectal ultrasound and serum prostate-specific antigen concentration, were recorded. Nevertheless, despite good results, reinjection was necessary in 22 patients without symptomatic improvement at the 2-mo follow-up and in 14 patients without symptom reduction at the 6-mo evaluation [2].

Recently, enthusiasm for the widespread use of dual therapy (α -blockers and finasteride) has been dampened by the results of the Prostate Cancer Prevention Trial [5]. In that study, the finasteride group had an absolute reduction of nearly 25% in the prevalence of prostate cancer detected on prostatic biopsy but an increased risk of high-grade prostate cancer. In contrast, in our experience, after BoNT treatment, no appearance of prostatic cancer was reported during the follow-up period. Intraprostatic BoNT injection, however, might have an anticancer effect.

Conflicts of interest: The authors have nothing to disclose.

References

- [1] Oeconomou A, Madersbacher H, Kiss G, Berger TJ, Melekos M, Rehder P. Is botulinum neurotoxin type A (BoNT-A) a novel therapy for lower urinary tract symptoms due to benign prostatic enlargement? A review of the literature. *Eur Urol* 2008;54:765–77.
- [2] Brisinda G, Cadeddu F, Vanella S, Mazzeo P, Marniga G, Maria G. Relief by botulinum toxin of lower urinary tract symptoms owing to benign prostatic hyperplasia: early and long-term results. *Urology* 2009;73:90–4.

- [3] Apostolidis A, Dasgupta P, Denys P, et al. Recommendations on the use of botulinum toxin in the treatment of lower urinary tract disorders and pelvic floor dysfunctions: a European consensus report. *Eur Urol* 2009;55:100–20.
- [4] Chuang YC, Giannantoni A, Chancellor MB. The potential and promise of using botulinum toxin in the prostate gland. *BJU Int* 2006;98:28–32.
- [5] Thompson IM, Goodman PJ, Tangen CM, et al. The influence of finasteride on the development of prostate cancer. *N Engl J Med* 2003;349:215–24.

Giuseppe Brisinda*

Serafino Vanella

Giorgio Maria

Department of Surgery, Catholic School of Medicine,

University Hospital Agostino Gemelli, Rome, Italy

*Corresponding author. Istituto di Clinica Chirurgica,
Policlinico Universitario A. Gemelli, Largo Agostino Gemelli, 8,
I-00168 Rome, Italy. Tel. +39 06 3015 5398; Fax: +39 06 3015 6520
E-mail address: gbrisin@tin.it (G. Brisinda)

April 1, 2009

Published online on April 10, 2009