ABSTRACT

LOWER URINARY TRACT SYMPTOMS (LUTS) DUE TO BENIGN PROSTATIC HYPERPLASIA (BPH) ARE A COMMON CONDITION THAT AFFECTS MEN IN ADULTHOOD. MEDICAL THERAPY, INCLUDING α-RECEPTOR BLOCKERS AND ALPHAS-ADRENERGIC ANTAGONISTS, IS THE MOST COMMON THERAPY FOR BPH. HOWEVER, IMPROVEMENT OF SYMPTOMS IS OFTEN INEFFECTIVE AND SIDE EFFECTS CAN LIMIT ITS USE. ALTHOUGH SURGICAL TREATMENT FOR BPH HAS HIGH SUCCESS RATES, ITS INVASIVENESS AND POTENTIAL SIDE EFFECTS MAY REPRESENT SIGNIFICANT LIMITATIONS TO THE PROCEDURES. IN THIS CONTEXT, THERE HAS BEEN MUCH INTEREST IN ALTERNATIVE TREATMENTS FOR BPH AND INTRAOPERATIVE INJECTION OF BOTULINUM TOXIN TYPE A (BoNT-A) HAS BEEN USED IN A FEW SERIES WITH ENCOURAGING RESULTS. HOWEVER, A NUMBER OF QUESTIONS REMAIN UNANSWERED, SUCH AS ROUTE OF ADMINISTRATION, SITES OF INJECTION AND DOSAGES. THE OBJECTIVE OF THE PRESENT STUDY WAS TO ASSESS THE EFFICACY AND SAFETY OF THRESHROULTRAPTION INJECTION OF TWO DOSES OF BoNT-A FOR THE TREATMENT OF PATIENTS WITH BPH.

METHODS

The study was conducted at the Military Hospital Dr. Carlos Arvelo, Caracas, Venezuela, with approval of the Institutional Review Board. Written informed consent was obtained from all patients. Over a period of two years, 36 patients received a single BoNT-A intraprostatic injection. Inclusion criteria were symptomatic BPH with an International Prostatic Symptom Score (IPSS) > 8 and maximum flow rate (Qmax) < 12 mL/s. All patients had medical therapy with at least one α-adrenergic antagonist. Exclusion criteria were previous surgery for BPH, urethral stricture, prostate or bladder cancer, pelvic surgery or radiotherapy, neurological disease or presence of complications requiring surgical treatment, including urinary retention, bladder stone and bilateral hydronephrosis. The procedure was performed under local anesthesia using a rigid cystoscope. Patients were evaluated 3 and 6 months after the injection. The outcome measures were the comparison of IPSS, Qmax, postvoid residual, prostate volume and serum prostate specific antigen levels.

RESULTS

Statistically significant changes in IPSS, Qmax and PVR were observed after 3 and 6 months of treatment with both doses of BoNT-A, as demonstrated by the following figures and tables.

Table 1. Comparison between mean ± SD of IPSS, Qmax and PVR at baseline versus 3rd month evaluation.

Table 2. Comparison between mean ± SD of IPSS, Qmax and PVR at baseline versus 6th month evaluation.

Table 3. Mean ± SD of PSA values and prostate volume at baseline, 3rd and 6th month evaluations.

Table 4. Comparison between 100 and 200 UI of intraprostatic BoNT-A after 3rd and 6th month evaluations.

CONCLUSION

Therapeutical BoNT-A injection in the prostate is a simple and safe therapy for BPH. In the short-term follow-up, intraprostatic BoNT-A injection produced significant improvement in LUTS, Qmax and PVR.

The effects of 100 UI and 200 UI of BoNT-A were similar.