

VALIDATED INSTRUMENT TO ASSESS PAIN TOLERANCE DURING FLEXIBLE ENDOSCOPY FOR INTRADETRUSOR BOTOX-A INJECTION

Hypothesis / aims of study

Intradetrusor Botox-A (BTA) injection is a promising emerging therapy for Neurogenic and Idiopathic Overactive Bladder (OAB) refractory to the current antimuscarinic agents. Several authors have described the injection technique using a rigid cystoscope under intravesical installation of lidocaine with or without IV sedation. While this approach might be well tolerated in spinal-cord injured patients, sensate patients with Idiopathic OAB might not tolerate Botox Injection without IV sedation or anaesthesia.

We have developed a “sedation-free” flexible endoscopic technique for intradetrusor BOTOX injection and have prospectively evaluated pain tolerance using a validated instrument.

Study design, materials and methods

Twenty patients: 12 Female [Mean age 52 years, range (22-75)] and 8 Male, [Mean age 58 years, range (39-75)] with Idiopathic OAB refractory to oxybutynin and tolterodine were prospectively evaluated and subsequently randomized to either 100 Units (N= 8) or 150 Units BTA (N=12). Evaluation included: History and Physical, Urogenital Distress Inventory-6 (UDI-6), Global-visual analog scale QOL-improvement (0-100%), 24-hour voiding diary with attention to tidal voided volume (t-VV), urine analysis and culture, post-void residual (PVR), and multichannel urodynamics.

The office injection technique is as follows: The bladder is instilled with 40 ml of 1% lidocaine solution using a 14 French urethral Foley catheter. After 10 minutes, the bladder is distended with 100-200 ml of 0.9% normal saline to perform endoscopy. The supratrigonal detrusor muscle is injected with BTA 10 Units/ml in 10-15 separate sites (1 ml each injection) using a 14 FR flexible Olympus cystoscope with a 2.2 mm working channel which accommodates a 27 Gauge flexible Olympus injection needle (1050 mm working/4mm needle length). No IV sedation is used. Procedure time is measured using a timer: Starting/ Ending time = entrance/ removal from urethral meatus.

Results

The patients were prospectively evaluated for pain tolerance using a validated graded 0-10 (0 = no pain; 10= worse pain) visual analog scale (VAS) **during** and 15 minutes **after** injection. For the female patients (N=12) the mean pain score during the procedure was 2.6, [range (0-7)] and 1.6 [range (0-6)] after. For Male patients (N= 8) the mean pain score was 2.1 [range (0-6)] during and 1.1 [range (0-4)] after. The mean procedure time is 4.5 minutes (4-6 minutes).

19/20 patients have agreed to repeat the injection in 6 months using an identical technique. One patient (38 yo female, pain score 7 during injection) has requested either IV sedation or an analgesic tablet prior to the procedure for subsequent injections.

Interpretation of results

A validated instrument to measure pain tolerance has allowed us to gain confidence that intradetrusor injection of BTA using flexible endoscopy is well tolerated by sensate patients of either sex.

Concluding message

Flexible endoscopy is likely to emerge as the preferred technique to inject Botox in the office, particularly in male sensate patients. The procedure is rapid and well tolerated.