



100 UNITS OF INTRA-DETRUSOR ONABOTULINUMTOXIN A FOR IDIOPATHIC OVERACTIVE BLADDER PATIENTS REFRACTORY TO ANTIMUSCARINIC THERAPY

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Hypothesis / aims of study

Onabotulinumtoxin A or Botox® (BTX) have been used in patients with neurological and idiopathic overactive bladder (OAB). BTX is approved by the FDA to treat urinary incontinence resulting from overactivity of the bladder detrusor muscle caused by Multiple Sclerosis, or other neurological condition, in adults who have an inadequate response to anticholinergic medications or are unable to tolerate them. The optimal dose of BTX for idiopathic detrusor overactivity (IDO) refractory to conventional antimuscarinic therapy remains inconclusive. 50 to 300 units of BTX were injected into the detrusor.

Recently, Nitti et al. reported results from a large placebo-controlled trial of 100 units of BTX on 557 patients with idiopathic OAB. At 3 months, treated patients had greater improvement in incontinence episodes than placebo.

A dose-ranging phase II randomised study compared doses of BTX (50, 100, 150, 200 and 300 units) to placebo in improving urgency and weekly incontinence episodes. There was a durable effect with doses of 100 units.

We evaluated the subjective efficacy and effect duration of 100 units of intradetrusor injections of BTX in Chilean patients with IDO resistant to antimuscarinic therapy.

Study design, materials and methods

Between December 2007 and December 2013, in a prospective study, 86 consecutive patients with refractory idiopathic detrusor overactivity received a single dose of 100 units of BTX into the detrusor at one Chilean institution.

Before treatment, a multichannel urodynamic study was performed in all patients. We confirmed detrusor overactivity in all of them.

We used general anaesthesia and a rigid cystoscope with nontrigonal injection technique and 30 intradetrusor injection sites, 100 Units of BTX, diluted in 30 ml 0,9% saline solution (3,3 unit for ml.) or diluted in 20 ml 0,9% saline solution (5 unit for ml.) , were injected.

Patients were followed postoperatively for evidence and duration of efficacy and complications.

Results

The study included 60 women and 26 men (86 patients), with a mean age of 62.8 ± 11.4 years (range 44 to 88 years).

In 57 (66,3%) procedures, patients showed clinically 100% response. A partial improvement in regard to subjective symptoms was seen in 11 (12,7%) patients.

Two patients, who had partial response to the injections, got complete response when we added Trosipium.

In 18 procedures (20.9%), patients experienced no improvement in their symptoms following treatment.

All respondents exhibited reduced symptoms within the first week after treatment.

There were few adverse effects.

We did not have cases of urine retention.

7 patients had urinary tract infection, 3 of them with recurrent urinary tract infection and significant post-void residual.

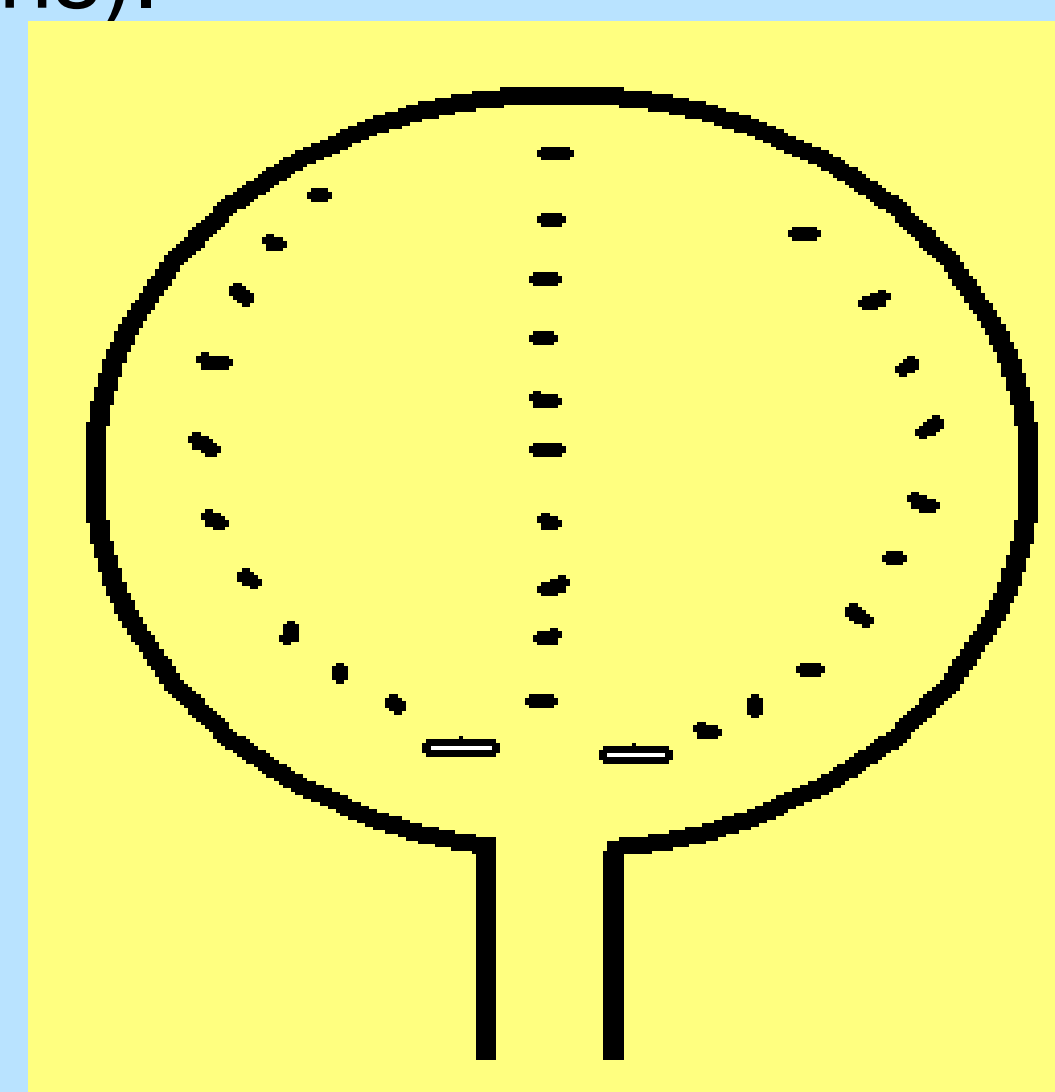
Effects were found to last a median of 9.3 months (range 4-43 months).

Interpretation of results

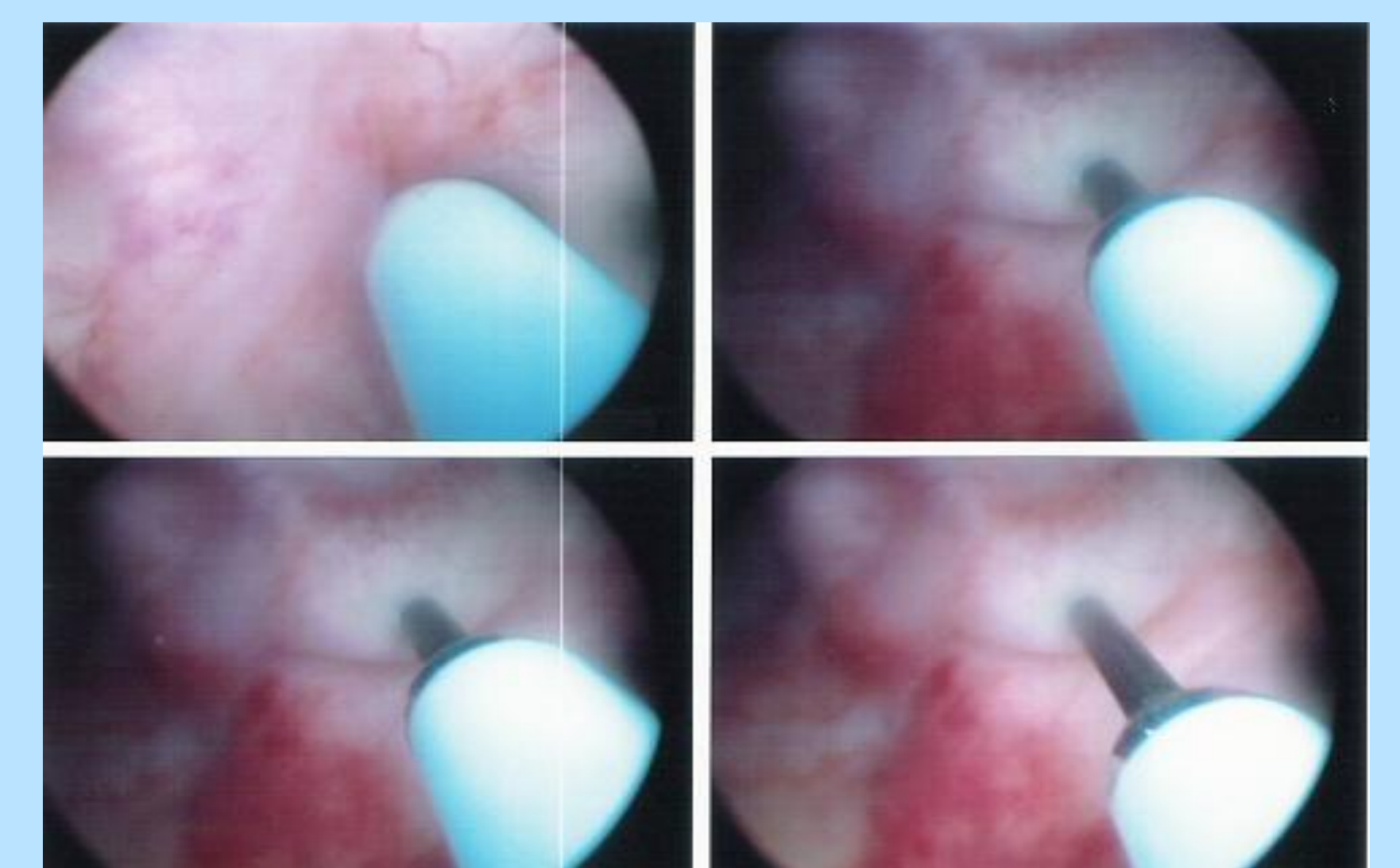
BTX intravesical injections provided clinical improvement in all OAB symptoms in refractory IDO patients. Improvements in symptomatology for respondent patients was spectacular. There were no significant perioperative complications in our patients.



Instrumental



Sitios de punción



Inyección intradetrusor

Concluding message

Our data demonstrate that intradetrusor 100 units BTX injection appears to be an effective, safe and durable treatment for IDO, provides a well-tolerated and rapid clinical improvement of symptoms. BTX ameliorates symptoms within the first week after treatment and its effects endure for several months.

BIBLIOGRAFIA

- 1.- [Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U, van Kerrebroeck P, Victor A, Wein A](#); The standardization of terminology of lower urinary tract function: report from the Standardization Sub-committee of the International Continence Society. *Neurourol Urodyn.* 2002; 21(2):167-78
- 2.- [Herbison P, Hay-Smith J, Ellis G, Moore K](#). Effectiveness of anticholinergic drugs compared with placebo in the treatment of overactive bladder: systematic review. *BMJ.* 2003 Apr 19;326(7394):841-4
- 3.- [Nabi G, Cody JD, Ellis G, Herbison P, Hay-Smith J](#). Anticholinergic drugs versus placebo for overactive bladder syndrome in adults *Cochrane Database Syst Rev.* 2006 Oct 18;(4):CD003781.
- 4.- Roger Dmochowski, Peter K. Sand Mini-reviews Botulinum toxin A in the overactive bladder: current status and future directions *BJU Int* 2007; 99 (2): 247-262.
- 5.- [Sheean G](#). Botulinum toxin for the treatment of musculoskeletal pain and spasm *Curr Pain Headache Rep.* 2002 Dec;6(6):460-9.
- 6.- Dykstra DD, Sidi AA. [Treatment of detrusor-sphincter dyssynergia with botulinum A toxin: a double-blind study.](#) *Arch Phys Med Rehabil.* 1990 Jan;71(1):24-6.
- 7.- Vinay Kalsi , Apostolos Apostolidis et al. Early effect on the overactive bladder symptoms following Botulinum neurotoxin type A injections for detrusor overactivity. *Eur Urol* 2008; 54: 181-187.
- 8.- Werner M., et al, Efficacy of botulinum-A toxin in the treatment of detrusor overactivity incontinence: a prospective nonrandomized study. *Am J. Obstet Gynecol* 2005; 192: 1735-1740.