

## **BASELINE URODYNAMIC PARAMETERS DO NOT AFFECT THE TREATMENT OUTCOME OF INTRAVESICAL 100U ONABOTULINUMTOXINA INJECTION FOR PATIENTS WITH IDIOPATHIC DETRUSOR OVERACTIVITY**

### Hypothesis / aims of study

Intravesical injection of onabotulinumtoxinA (BoNT-A) has recently been accepted as an alternative treatment for patients with overactive bladder (OAB) or detrusor overactivity (DO) refractory to antimuscarinic therapy. BoNT-A injection provides an alternative for non-surgical augmentation of the dysfunctional bladder. About 50% to 80% of OAB patients with or without DO regained urinary continence or improved in urinary control. Studies which decreased the dose of BoNT-A from 300 U to 100 U in the treatment of OAB found similar therapeutic effects. Recent studies revealed a dose of 100 U of BoNT-A had acceptable therapeutic effect and adverse events (AE). Patients with DO might have different urodynamic characteristics. The baseline urodynamic characteristics might affect the treatment outcome and the occurrence of AEs. Long-term therapeutic effect might also be affected by the baseline urodynamic parameters. This study analyzed the therapeutic outcome and AEs after intravesical injection of 100 U BoNT-A in patients with IDO. The influence of baseline urodynamic parameters on therapeutic outcome was also investigated.

### Study design, materials and methods

A total of 174 patients who received the first single intravesical BoNT-A 100 U injection for refractory IDO were included. The success rate was determined based on patient perception of bladder condition improved by 2 scales. The short-term (3 months) and long-term (up to 24 months) success rates were analyzed according to the baseline urodynamic parameters including cystometric bladder capacity, maximum flow rate, postvoid residual, voiding efficiency, and DO subtypes. The BoNT-A related adverse events were also reported.

### Results

A successful outcome was reported by 138 (79.3%) patients at 3 months. The baseline urodynamic parameters did not affect the success rates except that patients with phasic DO had a significantly higher success rate at 3 months than patients with terminal DO. Patients with a baseline postvoid residual (PVR)  $\geq 100$  ml had a higher rate of acute urinary retention and needed straining to void. However, long-term success rates up to 24 months showed no significant difference between patients with different urodynamic parameters.

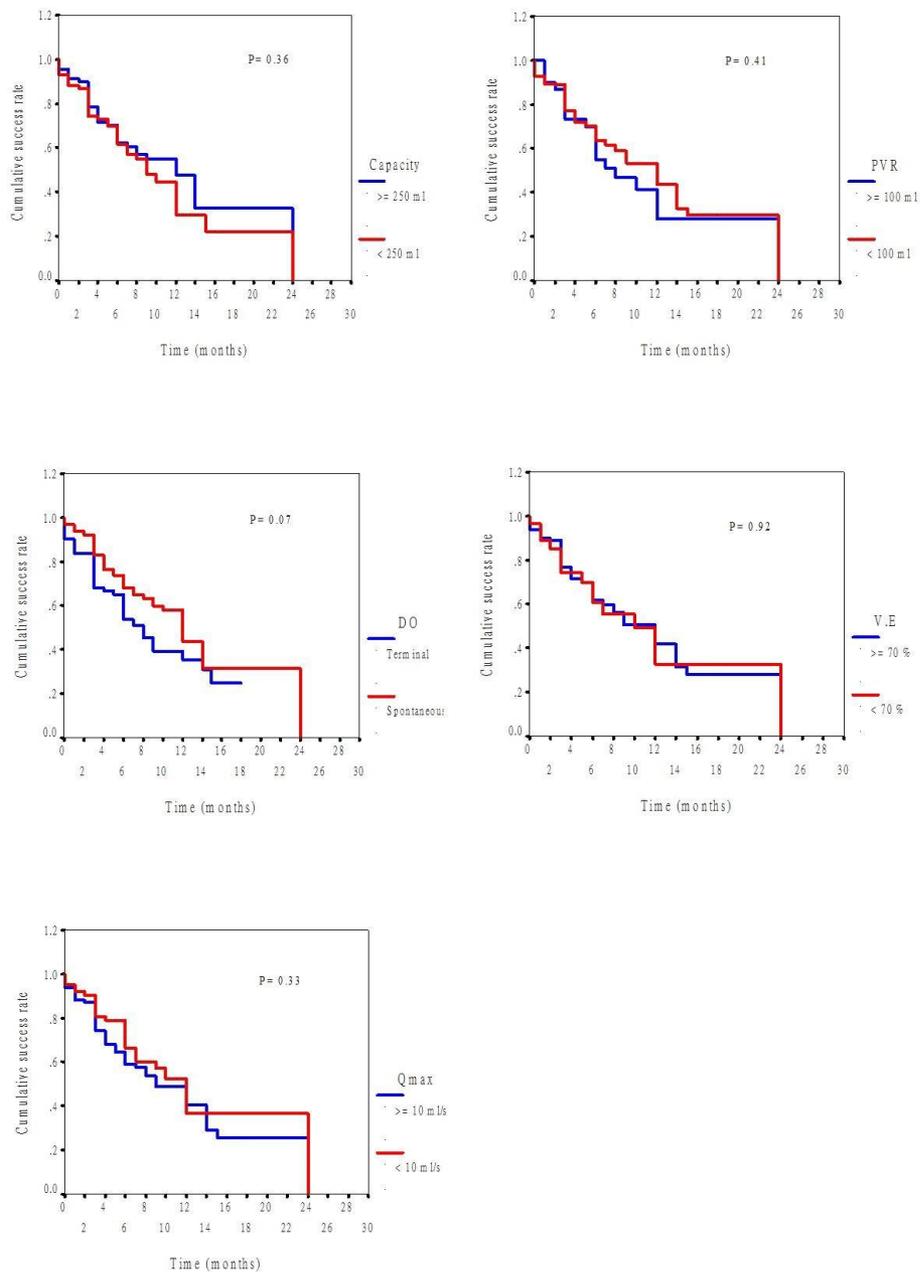
### Interpretation of results

This study found that the baseline urodynamic parameters do not generally affect the long term therapeutic outcome and the occurrence of AEs after 100 U BoNT-A injection for patients with IDO. However, patients with phasic DO have a higher success rate than terminal DO at 3 months. Although a baseline PVR  $\geq 100$  ml may yield a higher rate of AUR and straining to void, the long-term success rate does not inferior to patients with PVR  $< 100$  ml. (Fig.1)

### Concluding message

In conclusion, except for patients with phasic DO, the baseline urodynamic parameters did not affect the treatment outcome of intravesical injection of 100U BoNT-A for IDO. The occurrence of AUR and difficult urination were significantly greater in patients with baseline PVR of  $\geq 100$  ml. However, the occurrence of large PVR after treatment did not affect the success rate at 3 months or long-term follow-up.

Fig. 1. The Kaplan-Meier survival curves for the cumulative success rates of different patient subgroups with varying baseline urodynamic parameters. The treatment outcome was assessed using the PPBC, an improvement of PPBC scale from baseline by  $\geq 2$  was considered as having a successful outcome.



#### Disclosures

**Funding:** none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Buddhist Tzu Chi General Hospital Research Ethics Committee **Helsinki:** Yes **Informed Consent:** Yes