

## DOES LOWERING THE DOSE OF INTRAVESICAL BOTOLINIUM TOXIN A DECREASE THE EFFICACY?

### Hypothesis / aims of study

Intravesical injection of botulinum toxin A (BoNT/A) is increasingly used to treat refractory overactive bladder (rOAB). The dosing ranged between 200-300U for both neurogenic overactive bladder (NOAB) and idiopathic overactive bladder (IOAB). We reviewed the efficacy and side effects of BoNT/A in our practice using two different dosing regimens (300U for NOAB and 200U for IOAB prior to 2011, vs 200U and 100U post 2011).

### Study design, materials and methods

We retrospectively reviewed our practice between 2008 and 2012. We identified all patients who received intravesical BoNT/A for rOAB who failed at least 3 anticholinergic medications over a course of one year, or had side effects requiring cessation of treatment. We separated them into those who received 100, 200 and 300U. We compared the time of onset, duration of efficacy and rate of complications. Patients were reviewed at 6 weeks, 3, 6 and 12 months post injection including reporting any complications.

### Results

44 patients were identified (32-79 years); 13 had NOAB, 31 had IOAB. Prior to 2011, 5 had 300U for NOAB, whereas 8 had 200U for IOAB. 12 IOAB had 200U compared to 19 receiving 100U after 2011.

Time of onset of effect: NOAB who received 300U was an average 7 days (5-28) lasting 40-88 weeks (median 52) vs 10 days (7-35) lasting 22-72 weeks (median 51) in those who received 200U. There were three cases of acute urinary retention (AUR), two of urinary tract infection and one haematuria in those receiving 300U. There was only one case of AUR in those who received 200U.

Patients who received 200U for IOAB had onset of effect an average 10 days (7-21) lasting 16-52 weeks (median 32) compared to 10 days (7-15) and 20-52 weeks (median 31) in those who received 100U. There were two cases of AUR and one case of UTI in the 200U cohort, with none in those receiving 100U. There was one case of haematuria in those who had 100U.

### Interpretation of results

There was no significant difference in patients receiving 200 units or 100 units for refractory overactive bladder. There were not significant numbers of patients receiving BoNT/A for neurogenic overactive bladder to make a firm conclusion. There was a slight reduction in the duration till onset and efficacy. However, there were increased incidences of adverse effects.

### Concluding message

Our study showed that the lower dose of intravesical BoNT/A remains effective without reducing the duration of efficacy. Lowering the dosage may reduce the rate of complications.

### References

1. Outcomes of Intravesical Botulinum Toxin for Idiopathic Overactive Bladder Symptoms: A Systematic Review of the Literature. Anger et al. *Journal of Urology*
2. Efficacy of botulinum-A toxin in the treatment of detrusor overactivity incontinence: A prospective nonrandomized study. Werner et al. *American Journal of Obstetrics and Gynaecology*
3. Six-Year Follow-Up of Botulinum Toxin A Intradetrusorial Injections in Patients with Refractory Neurogenic Detrusor Overactivity: Clinical and Urodynamic Results. Giannantoni et al. *European Urology*

### Disclosures

**Funding:** Queen Elizabeth hospital **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** This is an audit of practice and not research **Helsinki:** Yes **Informed Consent:** No