

## **INJECTION OF BOTULINUM TOXIN-A (DYSPORT™) FOR INTRACTABLE IDIOPATHIC AND NEUROGENIC DETRUSOR OVERACTIVITY**

### **Synopsis of Video**

#### **Introduction**

This videotape shows the technique of intradetrusor injection of BotulinumToxin-A (Dysport™) by using transurethral injection system (BARD UK) for the treatment of intractable idiopathic and neurogenic detrusor overactivity.

Botulinum toxin (Dysport™) is produced by the bacterium clostridium Botulinum and is one of the most potent naturally occurring substances known. This toxin is a potent neuromuscular paralyzing agent that induces a temporary functional denervation and atrophy of the injected muscle. Due to this property, Dysport™ has been used in a variety of conditions where alleviation of muscle spasm or a temporary selective weakening of target muscle is desirable. Intradetrusor injection with this toxin appears to be highly effective treatment for patients with intractable idiopathic and neurogenic detrusor overactivity(1).

#### **Method**

The Drugs & Therapeutics Committee (DTC) has approved the intradetrusor injection of Botulinum toxin preparation (Dysport™) for detrusor overactivity. All women gave consent to treatment and were informed that the treatment was an unlicensed use of Dysport™, the long-term effects being unknown. They were warned about the risk of self-intermittent catheterization post-operatively. This procedure was done under general anaesthetic. A prophylactic antibiotic (Gentamicin) was given. Cystoscopy was performed using 0° telescope and Dysport was injected with 23G Bard™ Transurethral injection system. This injection system was used for transurethral bovine collagen injections, not tried for Botulinum Toxin injections. This needle has a working length of 33cm with a stabilizing cannula. Dysport is available in 500IU vial and was dissolved in 2-3 ml of saline. The bladder was filled and either (250-500IU) (for idiopathic detrusor overactivity) or 750IU (for neurogenic DO) of Dysport™ were injected (2). Twenty to 30 separate sites were injected with 0.1 ml each by using 2-4 insulin syringes, and the dead space of the needle flushed with normal saline. All women were assessed before and at 2 months and 4 months using a bladder diary and ICIQ and cystometry only pre-operatively.

#### **Conclusions**

The Bard™ transurethral injection system has the following advantages of easier to use and familiarity with the needle (used for collagen urethral implants). The protective stabilizing cannula prevents the needle being bent when working at the corners. All the women treated so far have shown a marked improvement in LUTS symptoms. The procedure takes <30 minutes and we recommend that women who have failed to respond to oral anticholinergics or bladder retraining be treated with intradetrusor injections of Dysport™.

#### **References**

1. Schurch B, Stohrer M, Kramer G, Schmid DM, Gaul G, Hauri D. Botulinum-A toxin for treating detrusor hyperreflexia in spinal cord injured patients: a new alternative to anticholinergic drugs? Preliminary results. J Urol 2000;164(3 Pt 1):692-7.
2. Grosse J1, Kramer G1, Stöhrer M11. Department of Urology, Berufsgenossenschaftliche Unfallklinik Murnau. The use of dysport® botulinum a toxin for detrusor injections in patients with severe neurogenic detrusor overactivity ICS abstract 2003 (193)

