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OUR EXPERIENCE WITH INTRADETRUSOR INJECTION OF BOTULINUM-A TOXIN IN PATIENTS WITH IDIOPATHIC AND NEUROGENIC DETRUSOR OVERACTIVITY

Hypothesis / aims of study
Intradetrusor injection of Botulinum-A toxin is a recognized treatment modality for patients with idiopathic and neurogenic detrusor overactivity refractory to conventional anticholinergic therapy. The aim of this study was to study the long-term safety and efficacy of intradetrusor Botulinum-A toxin injection in patients with idiopathic and neurogenic bladder overactivity resistant to anticholinergic therapy.

Study design, materials and methods
All patients undergoing intradetrusor Botulinum-A (Botox®, Allergan) injection between November 2004 and February 2008 were retrospectively identified. Prior to being offered intradetrusor Botulinum-A injection, all patients had failed at least two conventional anticholinergics either due to side-effects of lack of efficacy. All patients underwent pre-operative urodynamic studies to confirm detrusor overactivity and were able to perform intermittent self-catheterization (ISC) if required. Patients had either 200 units Botulinum-A toxin injected into 20 sites (idiopathic patients) or 300 units in 30 sites (neurogenic patients) via flexible cystoscopy with antibiotic cover (10 units per injection). Patients were followed up at 3, 6, 12, 18 and 24 months, using the short forms of the Urinary Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) to assess quality of life (QoL).

Results
45 patients underwent intradetrusor Botulinum-A injection between November 2004 and February 2008. 31 females and 15 males underwent the procedure; mean age was 56.89 years (range 31 – 85 years). 15 patients had neurogenic bladder overactivity (NDO) and received 300units Botulinum-A; one of these patients only had 290 units due to wastage; 30 patients had idiopathic bladder overactivity (IDO) and received 200 units Botulinum-A toxin; one of these patients only received 180 units. 2 patients with IDO did no tolerate the injections and the procedure was abandoned. 11 patients were required to perform ISC post-procedure (5 with IDO, 6 with NDO). Mean follow-up was 14 months (range 0 – 33 months); no follow-up was available for 12 patients). One patient died at 13 months from other causes, and no local or systemic side-effects were recorded.
Mean combined UDI-6/IIQ-7 score pre-operatively was 17.5 (n=37). By 3 months, mean UDI-6/IIQ-7 score was 3.5 (n = 13; range 0 – 10); by 6 months 6.7 (n = 18; range 0 – 24); by 12 months 7.4 (n = 10; range 0 – 28). 2 patients were followed up at 18 months and mean UDI-6/IIQ-7 was 10.5 (range 1 – 20). At 24 months follow-up all but one patient had recurrence of symptoms with mean UDI-6/IIQ-7 of 17.8 (n = 6; range 10 – 27) and had either undergone or were awaiting a repeat injection. 2 patients experienced no improvement in their symptoms following injection. 15 patients had recurrence of symptoms after a mean of 13 months (range 7 – 24 months); 10 of these patients underwent repeat injection after a mean period of 25.7 months and 5 patients are awaiting a repeat injection. 2 patients who had no response to the injections eventually underwent detrusor myomectomy.

Interpretation of results
Our data demonstrates that intradetrusor Botulinum-A injection is a safe and effective treatment for NDO and IDO in the majority of patients, with demonstrable improvements in UDI-6/IIQ-7 scores. Although mean time to recurrence was 13 months, the time to repeat procedures was after 2 years.

Concluding message
Intradetrusor Botulinum-A injections are effective in the treatment of refractory idiopathic and neurogenic detrusor overactivity, with symptomatic improvement lasting around 12 months.

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**It was a retrospective audit**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**