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CAN PRE-OPERATIVE URODYNAMIC RESULTS PREDICT THE OUTCOME OF INTRAVESICAL INJECTIONS OF ONABOTULINUM TOXIN A FOR OVERACTIVE BLADDER AND THE RISK OF POST-OPERATIVE URINARY RETENTION?

K. Aleksejeva, G. Scrimgeour, R. Axell, H. Yasmin, D. Motan, S. Unterberg, M. Nadeem, M. Pakzad, R. Hamid, J. Ockrim, T. Greenwell
University College London Hospital, UK

Introduction:

Intravesical Onabotulinum Toxin A (Botox A) injections are a common third-line therapy option for treatment of refractory overactive bladder (OAB) symptoms in adults. We have assessed whether pre-operative urodynamic findings can predict patient's outcomes and the need to catheterise (intermittently or indwelling) after Botox A injections.

Methods:

A retrospective review of all 418 patients (median age 61 years, range 22-90, 128 men) having intravesical Botox A injections for refractory OAB symptoms under the care of 4 consultant surgeons between 2006 and 2018 was conducted. The outcome of treatment was categorized using a 5 point Patient Global Impression of Improvement (PGII) scale at the last follow up appointment or when contacted by telephone if last review was over 6 months ago. Outcome was correlated with the pre-operative urodynamic findings. The need to self-catheterise (ISC) or have an indwelling urethral (IDC) or suprapubic (SPC) catheter was noted and correlated with the urodynamic parameters. Statistical analysis was by Students T-Test and Chi Square Test.

Results:

Urodynamic results were available for review on 311 (74%) patients, 97 men (age range 27-94, median 69) and 214 women (age range 22-90, median 59) having Botox A during this time period. 49% of patients had had previous significant pelvic surgery. 215 patients (69%) had confirmed idiopathic detrusor overactivity (IDO) on pre-operative urodynamics. Catheterisation post-Botox A injections was required in 135 (32%) of patients overall post Botox A.

The outcomes are listed in Table 1.

| | Failure (PGII>=3) | Partial Success (PGII=2) | Success (PGII=1) |
|----------------|-------------------|--------------------------|------------------|
| Women # traces | 62 | 24 | 128 |
| Men # traces | 39 | 11 | 47 |
| Women IDO | 36 | 13 | 96* |

| | | | |
|---|-------------|-----|-----|
| Women no DO | 26 | 11 | 32 |
| Men IDO | 28 | 8 | 36 |
| Men no DO | 11 | 3 | 11 |
| OAB Wet Women | 20 | 7 | 54 |
| OAB Wet Men | 17 | 7 | 20 |
| Median peak DO pressure Women (cmH2O) | 33 | 62 | 34 |
| Median peak DO pressure Men (cmH2O) | 50 | 61 | 60 |
| Volume at 1 st DO Women (ml) | 255 | 125 | 240 |
| Volume at 1st DO Men (ml) | 215 | 190 | 210 |
| Women with BOO | 3 | 4 | 10 |
| Men with BOO | 7 | 3 | 7 |
| Voiding detrusor contraction duration Women (s) | 63** | 107 | 86 |
| Voiding detrusor contraction duration Men (s) | 74 | 97 | 93 |

*P=.02

**P=.03

Conclusions:

Intravesical Botox A was significantly more successful in women with urodynamically proven IDO (75%) comparing with men (60%) and women with no DO (62%). Successful outcomes were significantly associated with increased duration of voiding detrusor contractions. De novo ISC or catheterisation was required in 32% and was significantly more likely in women with DO wet (p=0.007). Other urodynamic parameters were not predictive of the outcomes or the need to ISC.