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EFFICACY OF INTRAVESICAL BOTOX IN THE MANAGEMENT OF REFRACTORY BLADDER OVER ACTIVITY FOLLOWING AN INADEQUATE THERAPEUTIC RESPONSE TO TEMPORARY SACRAL NEUROMODULATION.

Hypothesis / aims of study

The management of the overactive bladder refractory to medication has been revolutionised by the introduction of sacral neuromodulation. In selected patients, neuromodulation can achieve significant reductions in voiding episodes, incontinence events, pad usage and improve quality of life (1). Prior to the implantation of a permanent neuroprosthesis, a temporary period of peripheral nerve evaluation (PNE) is carried out in order to identify responding patients. A number of patients however, will fail this initial assessment (2). In recent years, intravesical BOTOX has emerged as a simple but effective treatment for the overactive bladder. In this study we tested if BOTOX might be an alternative therapy for patients who have failed a trial of temporary sacral neuromodulation.

Study design, materials and methods

In this case controlled study we identified patients who underwent PNE over a 9 month period at a tertiary Urology centre. All patients had a prior diagnosis of urodynamic proven detrussor over activity and had failed proprietary therapy. Those patients who were judged to have not responded satisfactorily to PNE over a trial period of 10 days were then further assessed for inclusion into this study. In patients who consented to take part, 200IU of BOTOX was given by intravesical injection under general anaesthesia. Data was prospectively collected both pre and post PNE and BOTOX on objective voiding parameters. These included daytime frequency episodes, nocturia episodes, urgency (graded as severe, moderate or mild), urge incontinence (severe, moderate or mild) and number of urinary pads used in 24 hours. The grade of urgency and urge incontinence was scored by a single observer. In follow up, at a median of 6 months after BOTOX therapy, we also directly asked if the patients felt their symptoms had improved, if they were satisfied with the treatment and if they would have it repeated.

Results

13 patients were recruited into this study; 9 females and 4 males with a mean age of 42 (24-56) years. 10 patients had a diagnosis of idiopathic detrussor over activity while 3 had an underlying neurological cause. All had failed trials of anti-cholinergic medication, 6 had failed TENS therapy and 10 had previous hydro distension therapy. Prior to treatment, mean daytime frequency episodes and nocturia episodes were 17 and 4 respectively. Urgency was reported as being severe in 5 patients, moderate in 7 and mild in 1. 11 patients reported urge incontinence classed as severe in 1 patient, moderate in 6 and mild in 4. Five patients required a median of 5 pads a day (range 2-25). During PNE mean daytime frequency episodes and nocturia episodes were 11 and 3 respectively. Urgency was reported as severe in 2, moderate in 5 and mild in 6. Urge incontinence was reported as moderate in 3 and mild in 6 and absent in 4 patients. Following intravesical BOTOX, mean daytime frequency episodes and nocturia episodes were 8 and 2 respectively. Urgency was reported as moderate in 2, mild in 5 and absent in the rest. Urge incontinence was reported as mild in 3 and absent in 10 patients. Of the 5 patients who used pads, 3 did not require them after treatment and the remaining 2 required a median of 1 pad a day. 6/13 patients reported hesitancy and poor urinary flow during voiding and 4/13 reported incomplete bladder emptying. None required catheterisation or ISC. On direct questioning 10/13 patients reported improved symptoms, were satisfied with the treatment and would have it repeated again. The remaining 3 either failed to derive any benefit from treatment or cited voiding difficulties as unacceptable despite some improvement in their urinary symptoms.

Interpretation of results

Following BOTOX injection 10/13 (77%) of patients who had failed PNE had objective improvement in daytime frequency and nocturia events. Complete response in the symptom of urgency was achieved in 6/13 (46%) patients. Complete response in urge related incontinence was observed in 8/11(73%) of patients. Pad usage was also significantly reduced. A significant number of patients however (46%) reported experiencing some difficulty in voiding after BOTOX treatment.

Concluding message

Intravesical BOTOX might be an effective treatment option for patients who do not respond to a trial of sacral neuromodulation. Patients however, need to be informed of the potential risk of developing voiding difficulties after therapy.

References

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