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COMPLICATIONS OF ENDOSCOPIC BOTULINUM TOXIN INJECTION IN PATIENTS WITH AMS 800 ARTIFICIAL URINARY SPHINCTER

Hypothesis / aims of study

The coexistence of detrusor overactivity (DO) and sphincter deficiency in incontinent patients following prostate surgery is estimated in up to 45% (1). DO is usually treated before the surgery however it may persist after implantation of an artificial urinary sphincter (AUS). Treatment with Botulinum Toxin (BoNT) is an alternative in DO refractory to oral treatment. Urethral manipulation and endoscopic manoeuvres are risk factors for AMS 800 AUS erosion and infection (2).

The objective of the present study is to evaluate the complications of endoscopic injection with BoNT in patients with AMS 800 AUS in place. Secondarily we evaluated the clinical outcome.

Study design, materials and methods

We retrospectively evaluated 304 patients treated with AUS from 1990 to 2015 at our institution. Among them, 13 patients presented clinically significant DO, refractory oral treatment, who accepted BoNT injection. The procedure was performed trough a 16 Ch flexible cystoscope by using a 35 cm BoNee® (Coloplast) needle. Previous to the injection the cuff was voided and the AUS deactivated.

The risk factors evaluated for eventual erosion (3) was previous radiotherapy, 4 patients (30%), Diabetes Mellitus, 2 patients (15%) and previous surgeries on the same area, 2 patients (15%) had a previous AUS cuff replacement in bulbar urethra. The size of the cuff was 4 cm in 6 patients (46%), 4.5 cm in 4 patients (30%) and 5 cm in 3 patients (23%). All cuffs had been placed at the bulbar urethra around the bulbospongiosus muscle through perineal approach.

The presence of immediate and late complications, device survival, reinterventions and risk factors for erosion were evaluated.

Results

After a mean follow-up of 37 months (7-65), there were no device explantations (Device survival is 100%). There have been no erosions or AUS infections secondary to transurethral manipulation. One patient had an urinary infection treated with oral antibiotics and another patient had an acute urinary retention managed by bladder catheter placement (Clavien I and II respectively).

The clinical outcome was satisfactory in 10 patients (76%) with a decrease in the number of pads (3 vs. 1) and an increase in bladder capacity measured by voiding diary (168 vs. 297 ml.)

Interpretation of results

BoNT injection by using a small needle through flexible instruments is a reliable technique for the treatment of DO in patients with AMS 800 AUS. The technique is feasible even when a small cuff is placed and in patients with previous radiotherapy. There is a low risk of complications due to this approach.

Concluding message

This is the first study reporting the safety of BoNT injection in patients with AMS800 AUS placed in bulbar urethra.

Based on our results, in patients with refractory DO and previously implanted AMS800 AUS, BoNT injection may be considered a safe and effective alternative treatment.

References

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