

CAN PREOPERATIVE URODYNAMIC STUDY PREDICT A SUCCESSFUL BULBOPROSTATIC ANASTOMOSIS IN PATIENTS WITH POSTERIOR URETHRAL DEFECT?

Hypothesis / aims of study

The golden triad for a successful outcome in perineal urethroplasty has been defined as complete excision of scarred tissue, a lateral fixation of healthy urethral end mucosa, and the creation of a tension-free anastomosis. However, even if these were successfully carried out, urethral stricture recurrence (USR) can take place in some patients. We hypothesized that decreased detrusor contractility may be associated with USR because it is probable that USR may take place more under the condition of collapsed urethra. Therefore, we evaluated the association between the preoperative urodynamic study and the outcome of bulboprostatic anastomosis (BPA) in patients with posterior urethral defect.

Study design, materials and methods

We retrospectively reviewed the records of 162 patients who underwent perineal BPA for traumatic posterior urethral injury between January 2001 and May 2011. Of these patients, 48 patients who performed an urodynamic study before BPA were selected. The intravesical catheter was inserted through the suprapubic cystostomy. First sensation of bladder filling (FSF), first desire to void (FDV), strong desire to void (SDV), and bladder compliance were measured as the bladder filled. The presence of detrusor overactivity and detrusor contraction was also evaluated. Decreased bladder compliance was defined as ≤ 12.5 ml/cmH₂O. The clinical outcome was defined as a success when the peak urinary flow rate was greater than 15 mL/s after urethral catheter removal and any postoperative treatment was not required at least 1 year.

Results

Among 48 patients, the success rate was 47.9% (23 of 48 patients), and mean follow-up period was 30.8 ± 22.4 months (range, 12-104 months). Mean age was significantly lower in patients with success (32.4 ± 10.2 years) than without success (44.8 ± 14.6 years, $p=0.002$). FSF, FDV, and SDV were lower in patients with success (FSF= 149.2 ± 76.9 ml; FDV= 228.9 ± 129.7 ml; SDV= 281.0 ± 142.4 ml, respectively) than without success (FSF= 177.8 ± 76.9 ml; FDV= 228.9 ± 129.7 ml; SDV= 281.0 ± 142.4 ml, respectively), but these were not statistically significant. There were not any associations between successful outcome and decreased bladder compliance, detrusor overactivity, and detrusor contraction (Fisher's exact test: $p=0.454$, $p=0.601$, and $p=0.668$, respectively).

Interpretation of results

There were not any significant association between preoperative urodynamic data and outcome of BPA.

Concluding message

FSF, FDV, and SDV were lower in patients with success than without success after BPA, but these were not statistically significant. The preoperative urodynamic study does not appear to be a reliable tool to predict a successful outcome of BPA in patients with posterior urethral defect.

Disclosures

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