This study analyzed treatment outcomes and identified predictive factors for successful urethral onabotulinumtoxinA treatment of voiding dysfunction due to urethral sphincter hyperactivity.

**METHODS**

Patients with voiding dysfunction due to urethral sphincter hyperactivity were retrospectively reviewed. Patients were treated with injections totaling 100 U of onabotulinumtoxinA into the urethral sphincter. Treatment outcomes were assessed 1 month after treatment using the Global Response Assessment. Treatment outcomes were analyzed by demographic and baseline video-urodynanmometric characteristics.

**RESULTS**

Of the 95 patients included, good outcomes were reported in 58 (61.1%) patients. Treatment outcome was not related to age, gender, or voiding dysfunction subtype. Patients with good outcomes had a significantly smaller volume at first sensation of filling (p=0.046), greater Pdet (p=0.027), higher Qmax (p=0.017) and smaller PVR (p=0.006). An open bladder neck during voiding was the only predictor of successful therapeutic outcome (88% good outcomes, 12% poor outcomes, p<0.001). Patients with non-neurogenic voiding dysfunction had a significantly longer therapeutic duration than those with neurogenic voiding dysfunction (9.55±4.18 vs 7.44±2.91 months, p=0.033). Increased urinary incontinence was reported in 18 patients, including 6 with stress urinary incontinence and 12 with urgency urinary incontinence.

**CONCLUSIONS**

OnabotulinumtoxinA urethral sphincter injection is effective in 61.1% of patients with voiding dysfunction due to neurogenic or non-neurogenic voiding dysfunction refractory to conventional medical treatment. Careful evaluation of the bladder neck opening at baseline provides predictive value for a successful treatment outcome. However, urinary incontinence might be a de novo adverse event after the urethral sphincter onabotulinumtoxinA injections.