PD2-4:
REDUCTION OF URGENCY SEVERITY IS THE MOST IMPORTANT FACTOR IN THE SUBJECTIVE THERAPEUTIC OUTCOME OF INTRAVESICAL ONABOTULINUMOTOXINA INJECTION FOR OVERACTIVE BLADDER

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Purpose: This study investigated the relationship between the subjective outcome assessment and objective parameters after intravesical onabotulinumotoxinA injection in patients with overactive bladder.

Materials and Methods: A total of 77 patients with urodynamically confirmed detrusor overactivity were treated with intravesical injection of 100 U of onabotulinumotoxinA in 20 divided injections (5 U in 0.5 ml normal saline each) at different sites sparing the trigone. The primary endpoint was the change in the Global Response Assessment (GRA) 3 months after treatment. All patients were monitored monthly after treatment for up to 6 months. Patients were divided into the successful and failed treatment groups according to the change in their GRA (≥2 and ≤1, respectively) 3 months after injection. The changes in voiding diary variables, Urgency Severity Score (USS), Overactive Bladder Symptom Score (OABSS), maximal bladder capacity (MBC), post-void residual (PVR) volume, and voiding efficiency (VE) were compared between groups at each time point.

Results: Overall, the USS and OABSS and MBC improved after treatment. Three months after BoNT-A injection, 49 (64%) patients reported an improvement in the GRA of 2 (n = 30) or 3 (n = 19). Six months after treatment only USS, OABSS, and urgency episodes showed significant difference between the groups. No significant difference in MBC, PVR or VE was noted between groups at 6 months.

Conclusion: Subjective, successful treatment outcomes of intravesical onabotulinumotoxinA injection for treatment of overactive bladder were significantly associated with a reduction in USS and decreased urgency and urge urinary incontinence episodes.

PD2-5:
SAFETY AND EFFICACY OF BOTULINUM TOXIN A TREATMENT FOR PATIENTS WITH DETRUSOR OVERACTIVITY AND INADEQUATE CONTRACTILITY

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Purpose: Overactive bladder (OAB) is common in older adults and is associated with substantial impairment in mental health and quality of life. Part of the patients with underactive bladder (UAB) or detrusor underactivity (DU) may have both detrusor hyperactivity and inadequate contractility (DHIC), resulting in UIU and large PVR. Botulinum toxin A (BoNT-A) significantly improves OAB symptoms and urodynamic parameters in OAB. However, the increased PVR volume and risk of urinary tract infection (UTI) may show after BoNT-A treatment.

Materials and Methods: This study retrospectively analyzed the therapeutic efficacy and safety in OAB patients who had a baseline PVR >100ml or VE <67% and received intravesical BoNT-A 100U injections A total of 21 patients with urodynamically proven DHIC and 21 age-matched controlled OAB patients with urodynamic DO were selected from our previous clinical trials. Patients of either gender, aged ≥20 years, with urodynamic DO and at least one episode of urgency [USS severity score ≥2] or urgent urinary incontinence [UUI] per day, as recorded in a 3-day voiding diary, were enrolled. All patients had been managed with behavioral modification and treated with a certain number. Patients were treated with suburethral injections of 100 U BoNT-A, total 20 injections in the bladder body, sparing the trigone. All patients were evaluated at baseline, 2 weeks, and 1, 3, and 6 months after treatment. The common AEIs included acute urinary retention (AUR) (severe difficulty urinating with a PVR volume >250 mL and necessitating the use of an indwelling catheter or CIC), gross hematuria, and general weakness during the early stage and a large PVR volume >250 mL, straining to void (experiencing difficulty urinating and requiring abdominal straining to empty the bladder, which was not experienced before treatment), and UTI (symptomatic or asymptomatic with a WBC count > 10/HFPI in urinalysis) during the follow-up period.

Results: The mean age of DHIC and OAB patients were 71.2 ± 8.2 and 70.9 ± 14.1 years, respectively. The subjective symptom scores after BoNT-A, including OABSS, USS, PPBC and GRA all showed significantly improved in both groups and no difference between groups. However, the changes of urgency episodes per 3 days were only noted in OAB patients after BoNT-A injection. UUI was significantly improved at 3 months and frequency episode was significantly improved at 6 months in OAB patients, but not in DHIC patients. Interestingly, there was no increase of bladder capacity or voided volume in either group. Qmax showed no significant change after BoNT-A injection in either group. PVR increased in DHIC patients at 2 and 4 weeks, but not at 3 and 6 months after BoNT-A injection. However, in OAB patients, the significant increase of PVR was noted at 2 months and lasted to 6 months. VE also showed the same changes as that noted in PVR in DHIC and OAB patients. AUR was noted in 7 and 3 patients, large PVR >250ml in 12 and 7 patients, difficult urination in 15 and 14 patients, and UTI in 8 and 4 patients of DHIC and OAB patients, respectively. After BoNT-A injection, 7 DHIC patients and 16 OAB patients considered the treatment was effective in improving quality of life. Among these patients, the therapeutic efficacy lasted for a mean of 2.3 months and 4.5 months in DHIC and OAB patients, respectively.

Conclusion: Patients with DHIC might not benefit from intravesical BoNT-A injection for their OAB symptoms. The urgency episodes are not decreased after BoNT-A injection and the therapeutic duration is significantly shorter than that of OAB patients.

PD2-6:
FEMALE VOIDING DYSFUNCTION – A VIDEOURODYNAMIC ANALYSIS OF THE ROLE OF BLADDER NECK AND PELVIC FLOOR MUSCLES

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Purpose: To date, there is lack of consensus about a precise diagnosis and definition of voiding dysfunction (VD) in women. Symptoms of storage and voiding can manifest solely or co-existing, which might suggest an independent pathophysiology or involved with one another. This makes treatment for female VD especially challenging. In this study, we examined the underlying pathogenesis of female VD and in particular, focused on the role of bladder neck and pelvic floor muscles.

Materials and Methods: We retrospectively reviewed all video-urodynamic study (VUDS) from 1914 women who referred to us for investigation of VD. Based on their VUDS findings, female VD can be categorized into 2 domains: bladder dysfunction (BD) and bladder outlet dysfunction (BOD). BD is consisted of bladder neck dysfunction (BND), cystocele, dysfunctional voiding (DV), poor relaxation of the external sphincter (PRES), and urethral stricture (US). We analyzed the age distribution, presence of detrusor overactivity (DO), influence of co-morbidities and treatment modalities in BND and PRES groups.

Results: BOD was responsible for 42.3% of all female VD cases and in comparison to BD, those with BOD were younger in age (p < 0.000). The most common VUDS findings of BOD were PRES (41.5%), DV (40.1%) and BND (12.3%). BND was prevalent in patients aged >55 years (72%). For most of the BND patients, DO was a concurrent feature especially in those older than 55 years of age (51.6%). Numbers of co-morbid medical conditions were identified in women with VD, including hypertension, type2 diabetes, coronary artery disease, chronic kidney disease and chronic obstructive pulmonary disease; none of these were significantly associated with BND. Usage of alpha blockers can significantly improve maximal flow rate (Qmax) in patients with BND from 7.6 ± 4.39 ml/s to 12.06 ± 4.99 ml/s (p = 0.000). In addition, transurethral incision of bladder neck (TIU-BN) can also facilitate self voiding in the cases of BND refractory or intolerant to alpha blockers.

Conclusions: Voiding dysfunction (VD) in women is rather a complex and poorly-understood disorder. PRES and DU are two most common diagnoses in female VD. BND is prevalent in patients older than 55 and is highly associated with DO. Alpha blockers and TIU-BN are effective in improving Qmax in BND.