

## FEMALE BLADDER NECK DYSFUNCTION- A VIDEOURODYNAMIC ANALYSIS OF FEMALE VOIDING DYSFUNCTION

### Hypothesis / aims of study

Diagnosis and treatment of voiding dysfunction (VD) in women can be challenging. In this study, we examined the heterogeneous nature of female VD and in particular, bladder neck dysfunction (BND) and its treatment.

### Study design, materials and methods

We retrospectively reviewed a total of 1914 women whom underwent videourodynamic study (VUDS) for VD. Based on their VUDS, causes of female VD can be divided into 2 categories: bladder outlet dysfunction (BOD) and bladder dysfunction (BD). We specifically studied the women with BND, analyzed their age distribution, presence of detrusor overactivity (DO), influence of co-morbidities and efficacy of different treatment modalities.

### Results

In female VD, BOD was accounts for 42.3% (810/ 1914) of all cases. BND is among the common causes of BOD (12.3%; 100/ 1914) (Fig. 1). BND was prevalent in patients aged >55 years (72%). For majority of cases (51.6%), DO was a concurrent VUDS feature in those older than 55 years of age (Fig. 2). Although several co-morbidities 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 found to have significantly correlation with BND. Use of alpha blockers can significantly improve maximal flow rate (Qmax) in BND from 7.6±4.39 mL/s to 12.06±4.99 mL/s (p=0.000). Transurethral incision of bladder neck (TUI-BN) can also facilitate self voiding in the cases of BND refractory or intolerant to alpha blockers.

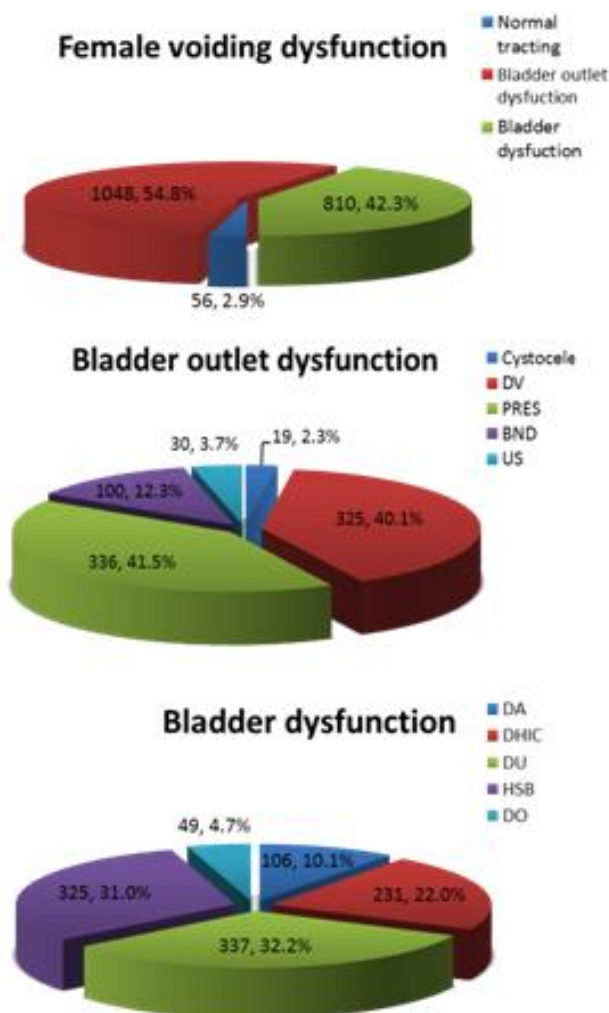


Fig. 1. VUDS diagnoses of female voiding dysfunction. DV: dysfunctional voiding, PRES: poor relaxation of the external sphincter, BND: bladder neck dysfunction, US: urethral stricture (US), DA: detrusor areflexia, DHIC: detrusor instability with impaired contraction, DU: detrusor underactivity, HSB: hypersensitivity bladder, DO: detrusor overactivity.

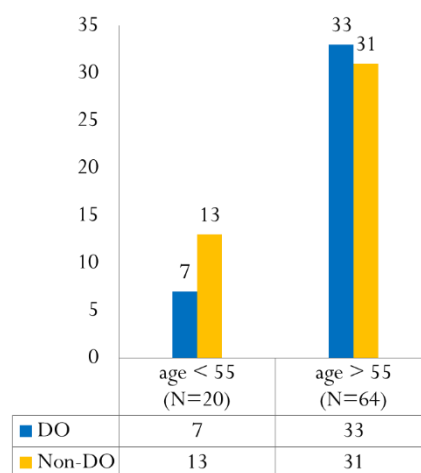


Fig. 2. Co-exist detrusor overactivity in BND patients.

### Interpretation of results

This is a retrospective analysis of a large cohort on female VD and focused on BND. Although there is currently very little data on its clinical course and management, we have indicated BND was prevalent in patients older than 55 with BOD. DO is a predominant feature observed in patients with BND, which may aid our knowledge on the underlying pathophysiology of BOD. Therapeutic options for BND can be medical or surgical. Both have demonstrated clinical efficacy.

### Concluding message

Voiding dysfunction (VD) in women is rather a complex and poorly-understood disorder. BND is prevalent in patients older than 55 and is highly associated with DO. Alpha blockers and TUI-BN are effective in improving Qmax in BND.

### Disclosures

**Funding:** none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Research Ethics Committee, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation **Helsinki:** Yes **Informed Consent:** Yes