

LOWER URINARY TRACT SYMPTOMS AND VIDEOURODYNAMIC CHARACTERISTICS OF FEMALE BLADDER OUTLET OBSTRUCTION

Hypothesis / aims of study

Diagnosis of bladder outlet obstruction (BOO) in women is important for the appropriate selection of treatment for female lower urinary tract symptoms (LUTS). Although the criteria for female BOO have not been well established, it has been emphasized that the anatomical narrowing of the bladder outlet in voiding cystourethrography is an important diagnostic criterion in addition to a high voiding pressure and a low maximum flow rate. This study analyzed the LUTS and videourodynamic characteristics of BOO in women.

Study design, materials and methods

Videourodynamic study was performed in 207 women with BOO. All patients had undergone physical examination, comprehensive history taking, cystoscopy and urinalysis. Patients with neurological disease were excluded from the study. Videourodynamic study was performed and BOO was diagnosed based on a voiding detrusor pressure of more than 35 cm water in combination with a Qmax of less than 15 ml/sec. Demonstration of a narrow site in the bladder outlet on voiding cystourethrography during videourodynamic study was also required for diagnosis. The results of videourodynamic study were categorized into 5 groups based on the findings of pressure flow study and voiding cystourethrography. The LUTS and urodynamic parameters were analyzed according to these videourodynamic classifications.

Results

The mean age of the 207 patients was 57 ± 23 (range, 12 to 88) years old. The videourodynamic study revealed bladder neck obstruction in 18 patients (8.7%), urethral sphincter obstruction in 56 (27.1%), pelvic floor muscle obstruction in 106 (51.2%), high grade cystocele and BOO in 13 (6.3%), and urethral stricture in 14 (6.8%). Both frequency and urgency were present in 94% of the patients. Urge incontinence was present in more than 60% of the patients with bladder neck obstruction or urethral sphincter obstruction. Mixed storage and empty symptoms were present in 57% of all patients. Compared with the other groups, patients with urethral stricture had the highest rate of difficult urination (93%) and miction pain (57%). Among the 17 patients with urinary retention, 10 had urethral sphincter obstruction and 5 had pelvic floor muscle obstruction. Stress urinary incontinence was present in 25 % of patients and in 62% of the patients with cystocele. Lower abdominal pain was reported by about a quarter of the patients with obstruction at the bladder neck (22%), urethral sphincter (25%), or pelvic floor muscles (29%). Detrusor overactivity was found in 52.7% of total patients, and was most frequent in those with urethral sphincter obstruction (78.6%). Patients with bladder neck obstruction had the highest voiding pressure and largest postvoid residual.

Interpretation of results

This study analyzed the clinical symptoms and videourodynamic characteristics in female BOO. Poor relaxation of the pelvic floor muscles was the most common finding (51.2%), followed by urethral sphincter obstruction (27.1%). Patients with bladder neck obstruction had the highest voiding pressure and largest postvoid residual. Differences in videourodynamic characteristics of women with BOO may be associated with the underlying pathophysiology of the bladder, urethral and pelvic floor muscle dysfunction.

Concluding message

Videourodynamic characteristics in women with BOO may be associated with underlying pathophysiology of the bladder, urethral and pelvic floor muscle dysfunction. Videourodynamic study provides accurate diagnosis and guidance for the selection of an appropriate therapeutic strategy.