

PATHOPHYSIOLOGY AND SUBJECTIVE SYMPTOMS IN WOMEN WITH VOIDING DIFFICULTY

Hypothesis / aims of study

Studies on voiding dysfunction in women have mostly focused on abnormalities in storage function, such as incontinence and frequency. However, voiding difficulty in female patients is not a rare clinical condition. We assessed the subjective symptoms and urodynamic characteristics of objectively confirmed voiding difficulty among female patients attending a urology clinic and evaluated the correlations between the subjective symptoms and the lower urinary tract function.

Study design, materials and methods

Eighty-three consecutive female patients attending a urology clinic with post-void residual urine of more than 100 ml were recruited, irrespective of the presence of lower urinary tract symptoms (LUTS). Free uroflowmetry, measurement of post-void residual urine and pressure-flow study were performed in all patients. The detailed assessment of subjective symptoms and their bothersomeness to the patients were assessed using a self-administered questionnaire comprising 12 items: 5 associated with voiding symptoms, 5 with storage symptoms, and 2 with discomfort and pain on voiding. The questionnaire was applied to 83 patients with voiding difficulty, 41 patients with urinary incontinence, and 21 normal controls.

Results

Although 77% of the patients with voiding difficulty consulted a urology clinic because of voiding symptoms, the rest of the 23% complained of storage symptoms or symptoms other than LUTS. The pressure-flow study revealed the pathophysiology of voiding difficulty as impaired detrusor contraction in 68 patients (81.9%), and bladder outlet obstruction in 12 patients (14.8%)(Table 1). The assessment of subjective symptoms using the questionnaire revealed that the patients with urinary incontinence showed a high frequency only in storage symptoms; however, those with voiding difficulty revealed a high frequency not only in voiding but also in storage symptoms(Figure 1). Initially all the patients were treated by clean intermittent catheterization (CIC). Following a variety of treatments including CIC, drug therapy, and surgery, 54 patients (65.1%) achieved self-voiding; however, 27 patients had to continue CIC and an indwelling urethral catheter was inserted in two patients.

Interpretation of results

In the present study, the incidence of neurogenic bladder caused by radical hysterectomy for uterine cancer is high, which is peculiar to women. On the other hand, bladder outlet obstruction was the cause of voiding difficulty in 12 patients (14.4%). Three patients diagnosed with bladder-neck obstruction were treated by transurethral bladder-neck incision and 2 patients were administered an alpha-blocker. All patients showed a significant improvement in both subjective and objective findings. Since the subjective symptoms and uroflowmetry cannot distinguish the two pathophysiologies, the pressure-flow study has an essential role in evaluating female patients with voiding difficulty. In the present series of the patients with overt voiding difficulty, 77% of the patients consulted a urology clinic because of voiding symptoms; however, 23% complained of storage symptoms or symptoms other than LUTS. Thus, the discrepancy between symptoms and lower urinary tract dysfunction was observed in one-fourth of the patients. In the assessment of symptoms and bothersomeness using the questionnaires, the patients with urinary incontinence showed high scores only in storage symptoms; however, those with voiding difficulty revealed high scores not only in voiding but also storage symptoms, revealing that voiding difficulty is associated with wider variety of symptoms.

Concluding message

Female patients with voiding difficulty present with a wide range of lower urinary tract symptoms associated with both voiding and storage symptoms. To determine an appropriate

treatment modality, the correct diagnosis of the underlying pathophysiology of voiding difficulty by pressure-flow study is of primary importance.

Urodynamic diagnosis	No. Pts. (%)
Detrusor underactivity	68 (81.9)
With low compliant bladder	2
With sphincter incompetence	2
Detrusor sphincter dyssynergia	6 (7.2)
Bladder-neck obstruction	6 (7.2)
Unevaluable	3 (3.7)

Table 1: Urodynamic diagnosis using pressure-flow study

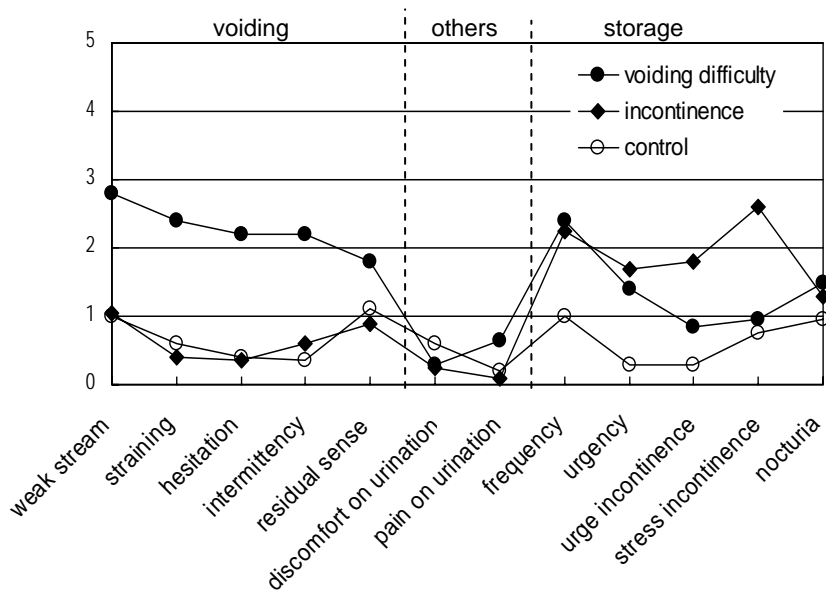


Figure 1: Comparison of frequency of lower urinary tract symptoms among female patients with voiding difficulty, those with urinary incontinence, and normal controls.