

## **EVALUATION OF PSYCHOLOGICAL AFFECTS AND IMPACTS UPON FEMALE LOWER URINARY TRACT DYSFUNCTION: IMPORTANCE OF PSYCHOLOGICAL TESTS IN DIAGNOSIS OF LOWER URINARY TRACT DYSFUNCTION**

### **Aims of the Study**

Lower urinary tract dysfunction (LUTD) complicated by psychogenic disorder is classified into two syndromes: frequency-urgency syndrome (FUS) and urinary retention syndrome (URS). We assessed the role of psychogenic diagnostic techniques in patients with LUTD, and discussed whether tests are available for accurate diagnosis of patients with LUTD in which a psychogenic disorder was suggested from aetiology.

### **Material and Methods:**

Fifty-six patients who were suspected of having psychogenic LUTD were studied: 27 of whom had FUS and 29 had URS. The assessment was performed by using general urological tests including urine culture, psychological test by means of the Cornell Medical Index (CMI) and Today's Egogram (TEG), psychological quantitative perspiration test, uroflowmetry and residual urine measurement, and video/urodynamic test. We performed a psychological quantitative perspiration study using 3 kinds of loading tests; i.e., respiratory, arithmetic, and psychological load. In the psychological loading test, we asked the subjects of 98 questions about their daily lives that covered their occupations, living conditions, family relationships and sexual activities. The arithmetic loading test consisted of reverse, subtraction and multiplication. The respiration loading test was performed to measure respiration volume when subjects inhaled deeply.

### **Results**

A look at patient's ages revealed two peaks, 20-year-olds and 60-year-olds. Of 51 patients, 27% had a history of pyuria. Patterns and values of peak flow-rate with a voided volume of 120ml or more resulted in a bell-shaped pattern with  $31.4 \pm 17.0$  ml/sec. in the FUS group, and low hill-like or serrated small wavy pattern with  $16.1 \pm 6.8$  ml/sec. in the URS group, respectively. Functional bladder capacity was less than 100 ml in most patients with FUS. Residual urine in the URS group was significantly greater. Most patients with FUS were able to hold more than 400ml of water through the transurethral catheter despite severe urgency. Nineteen percent of the FUS group showed uninhibited detrusor contraction of over 15 cmH<sub>2</sub>O in a video-urodynamic study.

A periodic follow-up survey of the upper urinary tract in 89% of patients with LUTD was required because of low compliance bladder: maximum vesical resting pressure between 15 and 19 cmH<sub>2</sub>O, especially more than 30 cmH<sub>2</sub>O in 31% of these patients. Most of the patients with LUTD demonstrated a round to triangular shape in their vesical configuration, which led to a spastic condition of detrusor muscle.

### **Interpretation of results**

The quantitative perspiration rate resulted in a "positive" result in many patients with FUS. Most of the patients with URS were within the normal range in the respiratory and arithmetic tests except for those of decreased or no perspiration during the psychological loading tests. These results may reflect such psychiatric elements as suppression and subconscious defense mechanisms.

Neurosis that was diagnosed as being type III or IV by CMI was demonstrated in less than 40% of patients with FUS and more than 55% with URS. In the psychological loading test, FUS patients with neurosis had significantly increased perspiration rates compared to the patients without neurosis. A "zero" perspiration rate in the psychological loading test was recognized in 14% and 29% of patients with type I and II CMI as weighed against in 27% and 46% of patients with type III and type IV, respectively.

However, no significant trends or differences in TEG were identified.

**Concluding message**

It is necessary to investigate using various examinations for accurate diagnosis of female lower urinary tract dysfunction due to the influence of various psychological responses.