

A STUDY ON THE KOREAN STANDARD VALUE OF URODYNAMIC PARAMETERS AMONG SUBJECTS UNDER 50 YEARS OLD

Hypothesis / aims of study

Urodynamics (UDS) data of normal population have not been published for Asian including Korean. The aim of present study was to define the standard values of UDS parameters of Korean among subjects aged 50 years or less.

Study design, materials and methods

We reviewed retrospectively the medical records of 1,840 patients from 3 urology centers (SEOUL Study Group) between the ages of 20 and 50 years who were performed UDS due to lower urinary tract symptoms (LUTS). The exclusion criteria were as follows: diabetes mellitus, neurologic abnormalities, prior pelvic surgery or radiation, poor general performance status, and taking a drug that affects the urination. Additionally, after UDS, we excluded patients who were diagnosed with post voided residual volume greater than 100ml, detrusor overactivity, abnormal compliance, bladder outlet obstruction, dyssynergia, detrusor underactivity, and maximal cystometric capacity less than 300ml. Finally, a total of 515 patients were analyzed. The Student t-test was used for continuous variables.

Results

Analyzed standard parameters are shown in Table 1. Detrusor pressure at maximum urinary flow was higher in men than women. By contrast, pressure flow study-maximum flow rate was higher in women. In comparison with western published data, cystometric capacity seems to be somewhat smaller in Korean of both sexes. Detrusor pressure at maximum urinary flow appeared to be a lower, especially in Korean men.

Interpretation of results

Based on analyses of large multicenter database, we suggested the normal values of UDS parameters of Korean among subjects aged 50 years or less. Data from healthy volunteers without LUTS may be more representative; however, getting UDS data from healthy volunteers may not be practical due to somewhat invasiveness of performing UDS.

Concluding message

Defining normal values of UDS parameters may be helpful to evaluate LUTS among subjects with various urological conditions. The normal ranges of UDS parameters in Korean subjects under 50 years old may be estimated from our findings.

Table 1. Analyzed standard urodynamic parameters among Korean subjects aged 50 years or less

	Male	Female	p value
Gender (%)	70 (13.6)	445 (86.4)	
Age (years)	41.2±9.1	43.5±6.1	0.046
First desire to void (ml)	269.8±107.7	260.2±93.7	0.434
Strong desire to void (ml)	356.2±109.4	352.7±93.9	0.780
Maximum cystometric capacity (ml)	410.3±77.4	409.9±66.5	0.966
PFS - Qmax (ml/sec)	16.4±5.4	24.6±7.7	<0.001
PdetQmax (cmH ₂ O)	39.1±10.4	25.7±10.4	<0.001
PFS - Post-void residual (ml)	11.6±17.9	11.1±19.4	0.849

PdetQmax: detrusor pressure at maximum urinary flow, PFS: pressure flow study, Qmax: maximum flow rate

Disclosures

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