

EVALUATION OF THE VALUE OF DIT ON FEMALE SUI BLADDER FUNCTION

Hypothesis / aims of study

To explore the value of detrusor isovolumetric test(DIT) on female SUI bladder function.

Study design, materials and methods

From Urodynamic Center of 59 SUI women were enrolled in this study. All of them were with the symptom of involuntary leakage of urine when abdominal pressure increased, the cough experiment was positive and diagnosed by Urodynamic test. The average age of patients was (53.9±11.1)years old and the course of morbidity ranged 2 months to 40 years. According to the SUI severity of symptom clinical index, the mild was 32 cases, the moderate was 20 cases, and the severe was 7 cases. With cystometry and DIT methods to evaluate their bladder function, compare the difference of detrusor contraction incidence, strength, first sensation of bladder filling, maximum cystometric capacity and bladder compliance between the two methods.

Results

The detrusor incidence was 40.68% with cystometry method versus 89.83% with DIT method ($p<0.05$), the maximum detrusor pressure was (22.80±16.97)cmH₂O versus (38.85±15.63)cmH₂O ($p<0.05$). The increased detrusor pressure during urination was (3.42±4.05)cmH₂O versus (21.72±13.43)cmH₂O ($p<0.05$). During the filling phase, there were no significant differences in maximum cystometric capacity and bladder compliance. However, with the method of cystometry, patients are more sensitive to the filling. The first sensation of bladder filling was (196.2±76.7)ml with cystometric method versus (214.0±72.8)ml with DIT method ($p<0.05$).

Interpretation of results

The parameter of detrusor incidence, the maximum detrusor pressure and the increased detrusor pressure during urination with DIT method were significantly higher than that with cystometry. These results indicated that DIT method can inspire the potential of detrusor contraction ability by increasing the urination resistance. The DIT method provided more accurate parameters to reflect the reality of the detrusor function, especially to these patients with detrusor weak contractility.

Concluding message

DIT is a valuable method to evaluate the bladder function of female SUI patients.

References

1. Osborn DJ, Strain M, Gomelsky A, et al. Obesity and female stress urinary incontinence. *Urology*, 2013, 82:759-63.
2. Ulrich D, Bjelic-Radisic V, Höllein A, et al. Quality of life and objective outcome assessment in women with tape division after surgery for stress urinary incontinence. *PLoS One*. 2017 Mar 27;12(3):e0174628.

Disclosures

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