

ROLE OF URODYNAMIC EXAMINATION ON THE EVALUATION OF NON-NEUROLOGICAL FEMALE URINARY INCONTINENCE

Hypothesis / aims of study

Urodynamic investigation used to be considered as a gold standard. However, recent studies have demonstrated that urinary incontinence symptoms had high positive predictive values, suggesting symptoms is helpful for diagnoses as well. We assess the role of urodynamic examination on the evaluation of non-neurological female urinary incontinence and compare with that of symptoms based diagnosis.

Study design, materials and methods

169 women with urinary incontinence symptoms were included, without neurogenic bladder, fistula, prior urologic surgery, advanced POP, or known lower urinary tract obstruction. On the basis of the most severe symptom score on the king's health questionnaire, they were divided into three groups of stress urinary incontinence (SUI), urge urinary incontinence (UII), and mixed urinary incontinence (MUI). Meanwhile, all patients underwent uradynatic test.

Results

In the 169 patients, 28% (48/169) had SUI, 18%(30/169) had UII and 54% (91/169) had MUI. Based on the urodynamics exam, 45% (77/169) of them were diagnosed as urodynamic stress incontinence, 16% (27/169) were detrusor overactivity, 21% (35/169) were both detrusor overactivity and urodynamic stress incontinence and 18% (30/169) were normal.

In SUI group, 54% (26/48) of patients had urodynamic stress incontinence, 4%(2/48) had detrusor overactivity, 17% (8/48) had mixed urodynamic incontinence, and 25%(8/48) had normal urodynamics. In UII group, 20% (6/30) had pure urodynamic stress incontinence, 37% (11/30) had pure detrusor overactivity, 13% (4/30) had mixed urodynamic incontinence, and 30% (9/30) had normal urodynamics. In MUI group, 50% (45/91) had pure urodynamic stress incontinence, 15% (14/91) had pure detrusor overactivity, 25% (23/91) had mixed urodynamic incontinence, and 10% (9/91) had normal urodynamics.

Interpretation of results

Urinary incontinence symptoms can't validly predicted eventual urodynamic diagnoses. With subjective measures, the prevalence of MUI is the highest in three types of UI. When urodymatic test are performed, the prevalence of SUI increases significantly at the expense of MUI^[1].

The urinary symptoms of stress urinary incontinence and urge urinary incontinence had a considerable high specificity for urodynamic stress incontinence and detrusor overactivity.^[2] Like previous studies, we found that 37% of patients had Detrusor overactivity in UII group. However, a ratio of 54% Urodynamic stress incontinence in SUI group was lower than that of previous reports. This variation may be due to different methods used to collect urinary symptoms and investigate the association with urodynamic diagnoses.

In addition, our study revealed that 50% of patients had urodynamic stress incontinence.in MUI group. The reasonable explanations were the fear of leaking and/or an urethro-detrusor facilitative reflex. In fact, 15% of women reported MUI symptoms was proved pure detrusor overactivity in present study. In this case, the stress incontinence symptoms might be attributed to stress-induced detrusor overactivity.^[3]

Treatment modality depends largely on incontinence types. Therefore, a correct diagnoses is fairly important. Some studies had demonstrated that urinary symptoms of pure stress urinary incontinence and urge urinary incontinence had a extremely high specificity for urodynamic stress incontinence and detrusor overactivity. However, the fact of few women with pure symptoms limited their application in the diagnosis. Consequently, no symptom was reliable enough to replace urodynamic testing. Urodynamics remain on serve as the "gold standard" test, which can precisely predict the pathophysiologic mechanism and guide the management of the women with urinary incontinence.

Concluding message

Urinary incontinence symptoms can't validly predicted final urodynamic diagnosis. When urodymatic test are performed, the prevalence of SUI increases significantly at the expense of MUI. Therefore, urodynamics test is important for making a definite diagnosis, which can precisely predict the pathophysiologic mechanism and guide the management of the women with urinary incontinence.

References

[1] J Clin Epidemiol 2003;48:339-43.

[2] Am J Obstet Gynecol 1997;177:262-267.

[3].obstet Gynecol 2003;102:76-83.

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