

URETHRAL FUNNELING IN THE DIAGNOSTIC OF THE FEMALE URINARY INCONTINENCE ASSESSED BY PERINEAL ULTRASOUND.

Hypothesis / aims of study

It has been claimed that there are differences in the art of incontinence and incidence of the urethral funneling. The ultrasound findings of the urethral funneling of the proximal urethra are common in women with the lower urinary tract dysfunction. The data of the imaging of the urethral funneling are in the literature controversially discussed (1, 2).

The aim of our study is to analyze the findings of the urethral funneling, visualized by the perineal ultrasound in the groups of patients with urge urinary incontinence, stress urinary incontinence and to compare these findings with the control group of the continent patients.

Study design, materials and methods

Data of total 150 female patients were analyzed in our retrospective study. These patients were examined in the outpatient department of the urogynecology in our clinic because of the diagnostic and treatment of the urinary incontinence or other symptoms of pelvic floor dysfunction.

The perineal ultrasound was performed at the standard condition using a Voluson 730 Expert GE healthcare and a transducer designed for abdominal use (3,5-5 MHz). The patients had bladder-filling volume of approximately 300 ml, were lying on the exam table with legs in the supine position and the examination was performed by one experienced senior physician. The urethral funneling was evaluated in the sagittal plane.

The data of the patients were subdivided into three groups according to the diagnosis and were analyzed afterwards. Group 1: 41 patients with a diagnosis of urge urinary incontinence (OAB), group 2: 67 patients with a diagnosis of stress urinary incontinence (SUI), group 3: 42 patients without a diagnosis of incontinence (CTRL).

Fisher's exact test was used for the statistic analysis.

Results

The urethral funneling was demonstrated in 10% patients with urge urinary incontinence (OAB) and in 12% patients with stress urinary incontinence (SUI). According to the Fisher's exact test, there was no significant difference between group of patients with OAB and group of patients with SUI.

There was no finding of the urethral funneling in the group of patients without diagnosis of urinary incontinence (CTRL).

The urethral funneling was demonstrated in 11% patients with the diagnosis of incontinence. There was statistically significant difference between patients with urinary incontinence and patients without diagnosis of urinary incontinence ($p < 0.02$).

Interpretation of results

Perineal ultrasound can identify anatomical changes, which are associated with urinary incontinence. The difference in the finding of presence of the urethral funneling between the patients with OAB and SUI was not significant. Our study shows that the anatomical changes in the proximal urethra are associated with urinary incontinence. There were no findings of the urethral funneling in the group of continent patients.

Concluding message

Ultrasound evaluation of the findings of the urethral funneling can improve the diagnostic in the urogynecology and is one of the important diagnostic qualitative parameter that can confirm the diagnosis of the urinary incontinence.

References

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2. Lange R., Casper F., Busse M., The role of the funnel shaped opening of the urethra in female incontinence. *Int. Urogynecol J* 1997; 8:24

Disclosures

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