

Correlation of Urodynamic Parameters in Disuria in Women With Urinary Disorders

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Abstract— Among numerous complaints presented by women during a visit to the urologist, a basic place is occupied by complaints about disorders of urination, the main manifestation of this state is enuresis. Enuresis is the state being characterized by the urine flow that can be demonstrated and presents a social-hygienical problem. [Bartoli 2009]

Keywords— enuresis, incontinence, urodynamic examination, disorder of urination

I. INTRODUCTION

THE urination disorders problem is relevant for both women and men, clinical analysis of urination disorders is sufficiently complex. In modern classification of enuresis (ICS, 2002) three forms compose the greatest proportion (specific weight): the stress that occurs in physical exertion (urinary incontinence with tension, UIWT), emergency or imperative urinary incontinence as well as mixed types [1]. Urination disorders take on special significance among patients of older age groups. [Milsom I, Abrams P, Cardozo L et al, 2001]. In women in climacteric period, involution processes in the reproductive system consisting in gradual age-related transformation prevail on a background of the synchronous age-related transformation of entire organism. [Мазо Е.Б., Кривобородов Г.Г., 2003. Milsom I, Abrams P, Cardozowan L ., 2001]. Menopause is the period of life of woman during which gradual ovarian failure of function of ovaries, development of estrogenic deficiency, forming of climacteric disorders including urogenital ones takes place. [АляевЮ.Г., Григорян В.А., Гаджиева З.К.с 143. 2006г].

Life quality of women of reproductive age is determined by many factors. Pregnancy and delivery are physiological processes of organism, but exert certain influence, both on the function of separate organs and on the woman's organism on the whole and contributing to the appearance of different symptoms which significantly reduce life quality of women.

Numerous researches showed that in enuresis there are marked disturbances of sphincter mechanism of urinary bladder neck, changes of its form, mobility, and axis "urinary bladder-urethra the normal function of the urinary bladder consists of the complex coordinated interaction between cerebral cortex, pons cerebelli spinal centres and anatomical

components of lower urinary ways.

The origin of LUW dysfunction may be due to functional or morphological changes at any level of this complex chain. The term "detrusor hyperactivity» (overactive bladder) HAUB applies in cases where manifestations of disorders of urination established according to the data of urodynamic researches are noted.

The aim of this research is the study of analysis of relationship of urodynamic indices and clinical manifestations in disorders of urination in women and a choice of the right treatment strategy.

A. The tasks

1. Study of urodynamic changes in disorders of urination in women.
2. Diagnostics and urodynamic characteristics and profile of intraurethral pressure in disorders of urination in women in different periods of menopause.
3. The administration of M-anticholinergic drugs according to urodynamic indices as one of the method of HAB treatment.

II. MATERIALS AND METHODS

For all types of disorders of urination, the complete urodynamic study is the main method of research. To define more exactly the features of urination disorders and changes in urodynamic parameters in women with varying degrees of severity of urogenital disorders, 130 women aged 25 to 75 years (mean age $45,3 \pm 2,5$ years) were examined, in the respondents of menopause with its duration from 2 to 35 years (mean duration $5,5 \pm 2,5$ years).

TABLE I
COMPARATIVE ANALYSIS OF INDICES OF URETHRAL PROFILOMETRY IN FEMALE PATIENTS WITH DISORDERS OF URINATION, DEPENDING ON THE SEVERITY OF URINARY INCONTINENCE

Indicators	Mild degree	Average degree	Severe degree	
Age	31,2±1,8	46,5±2,4	56,5±1,1	p < 0.05
Number of births	2	2	Bonee 2-x	
The maximum urethral pressure MUCP_rest cmH2O	46±2,5	53±2,5	66±2,5	p < 0.05
Urethral closure pressure of rest	10±2,5	21±10	57±2,5	p < 0.05
Ttransmission	90±2,5	96±2,5	73±2,5	p < 0.05
Functional length of the urethra FUL stress	23,2±1,5	30,0±2,5	37,6±2,5	p < 0.05
Functional length of the urethra FUL rest	26,4±1,5	25,2±2,5	38±2,5	p < 0.05
Qmax - ml	8±1,5	18±1,5	24±1,5	p < 0.05

The maximum urethral pressure in patients with average and severe degree of urogenital disorders was significantly lower ($53 \pm 2,5 \pm 2,5$ and 66 cm of water column) than in patients

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with mild degree of urogenital disorders ($46 \pm 2,5$ cm of water column) as well as the difference in the functional length of the urethra, decreasing in cough from $37,6 \pm 2,5$ to $23,2 \pm 1,5$ and at rest $38 \pm 2,5$ to $25,2 \pm 2,5$ cm water column. The transmission pressure which tends to decrease depending on the severity of the disorder of urination from 90 cm to 73 v water is of no small importance.

TABLE II
THE RESULTS OF QUESTIONNAIRE OF 130 WOMEN OF REPRODUCTIVE AND MENOPAUSAL AGE

Symptoms	Women of reproductive age (mean age - $38,5 \pm 2,5$ years)	Menopausal women (mean age - $56,8 \pm 1,5$ years)
Pollakiuria (%)	16,7	19,8
Nocturia (%)	14,2	21,5
Pollakiuria + Nocturia (%)	11,2	16,5
Pollakiuria + Nocturia + imperative urge (%)	25,5	32,5
Pollakiuria + Nocturia + imperative urge + urinary incontinence (%)	5,2	15,4
Pollakiuria + Nocturia + imperative urge + without urinary retention (%)	3,4	5,4
Medical aid appealability (%)	6,4	2,4

As the received data of the results of urodynamic studies showed, different changes of urethral pressure during urination disorders in women are noted.

To evaluate the clinical efficiency of "Spazmeks" (trospium chloride) preparation in the treatment of urinary disorders in women, as well as the presence of disorders of urination with vertebral diseases we examined 65 patients who complained of urgent, frequent urination. 10 patients of the 40 were women of reproductive age and 25 women during the menopause.

III. RESULTS

According to the examination results, the patients were divided into two groups. In 20 women there was "moist" HAUB (with urgency incontinence), and in the 45 - "dry" (without urgent incontinence of urine). According to urodynamic studies revealed the presence of chronic cystitis was revealed in 20(34%) patients, 3 patients (4.6%) had leukoplakia of mucous membrane, prolapse of the vagina of the 1st degree was found in 10 (15%) patients. After 24 weeks of treatment, while taking "Spazmeks" in the dose of 30 mg per day (15 mg two times a day) the decrease of the urination frequency per day was noted in all groups. Treatment resulted in a slight decrease in the number of urgent urge to urination and episodes of urgent urinary incontinence in all studied groups.

HAUB types	Good result (%)	Satisfactory result	Unsatisfactory result
HAUB «dry»	24	62	10
HAUB «moist»	12	43	12

In taking trospium in the dose of 30 mg per day in 3 (4,6%) patients had constipation, 2 patients (3%) complained of dry mouth. The severity of side effects was very low and did not require discontinuation of the drug.

IV. CONCLUSION

1. The main method of examination in women with urinary disorders is complex urodynamic study;
2. Complex urodynamic study should be carried out according to the appeal of the patients with disorders of urination to the clinics;
3. The maximum urethral pressure is one of the indicators needed during surgery and allows to perform accurate staging process, which undoubtedly affects the further prognosis of the disease and allows to determine further treatment approach;
4. Administration of M-anticholinergic drugs in the presence of urination disorders with symptoms of enuresis and HAUB is one of the correct methods of treatment strategy in these patient

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