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NEW OPPORTUNITIES FOR THE TREATMENT OF HYPERACTIVE BLADDER SYNDROME

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Abstract. *The article presents the results of methods used to develop urinary incontinence and treatment tactics for patients with OAB depending on its type. 50 patients with OAB who applied to the urology department during 2021-2024 were selected as the research object. According to the form of UI, conservative treatment and the use of BFB can be promoted as the most effective way to treat OAB in patients. According to it, it is appropriate to use antidepressants in stressful UI, m-cholinoblockers and beta-3-adrenomimetics, duloxetine in urgent UI and mixed UI in OAB.*

Keywords: *urinary incontinence (UI), overactive bladder (OAB) syndrome, risk factors, hormonal background.*

Relevance. Recent studies show that every second person aged 50-60 years has symptoms of urogenital tract discomfort in the form of urinary incontinence, dyspareunia, dryness and itching [13, 14]. Many researchers give different information about the differentiation and frequency of this pathological condition. Gadzhiyeva Z.K. According to (2001), the frequency of urinary incontinence (UI) in women living in Moscow is 8.7% at the age of 25-34 years, increasing to 33.6% at the age of 55-74 years, where the stress type of UI prevails (78%) [15].

Aim. Development of treatment tactics for patients with OAB depending on its type.

Research materials and methods. During the years 2021-2024, 50 patients with OAB who applied to the urology department were selected as the study object. Research methods: General examination methods and laboratory analyzes (general blood analysis, general urinalysis, biochemical analysis of blood); It consisted of special tests (Valsalva, diaper test and cough test), UTT and biological feedback therapy. The data obtained during the study were subjected to statistical processing using the Microsoft Office Excel-2012 software package on a personal computer, including the use of built-in statistical processing functions. The arithmetic average value (M), standard deviation, standard error of the average (m), relative values (frequency, %), statistics of the measurements obtained when comparing the average values of the studied indicator significance was determined by calculating the probability of error (P) in testing the normality of the distribution (according to the kurtosis) with Student's test (t) and equality of common variances (F - Fisher's test). The significance level of changes $P<0.05$ was considered statistically significant. Results. The results of previous pregnancy and childbirth were important in women examined to determine the causes of urinary incontinence: spontaneous abortion was observed in 6.67% of women in the comparison group and in the main group - 9.09% of women, premature births - 2 (13.3%) in the comparison group and 4 (18.18%) in the main group, non-developing pregnancy occurred in 1 (6.67%) and 2 (9.09%), respectively.

Pelvic floor muscle weakness was also a risk factor in all examined (RR=2.48). Obstetrical complications are often associated with: multiple births and heavy fetuses and surgery. A large number of pregnancies and deliveries lead to a change in the position of the uterus, as well as surgeries performed in the uterus and abdomen lead to relaxation of muscle tone in the later period (RR = 2.52). High birth weight was observed in 40.0% of those with UI in the comparison group and 45.4% in the main group. In women, during the birth of a heavy fetus, the birth canal, pelvic muscles are damaged (RR = 2.23), there may be ruptures and tears in the intermediate area, which is a risk factor for the development of UI later (RR = 3 ,2) is considered.

We used 3 types of tests to evaluate and diagnose UI:

The Valsalva test was positive in 21 (70%) subjects in the main group and in 11 (55%) subjects in the comparison group;

cough test - 23 (76.7%) in the main group and 9 (45%) in the comparison group gave a positive result;

diaper test was positive in 18 (60%) and 10 (50%) individuals in the groups, respectively.

In our study, according to the method of treatment, 50 patients were divided into 2 groups: main (n=30) and comparison (n=20) groups. Patients of the comparison group were treated conservatively with drugs. In addition to conservative drug therapy, physiotherapeutic method - BFB-training was applied to the main group of patients.

Drug therapy was prescribed according to the type of urinary incontinence. All patients were classified according to urgent UI and mixed type of UI in stressful, hyperactive bladder syndrome. For the treatment of urinary incontinence in hyperactive bladder syndrome, we used drugs of the M-cholinoblockers group. If therapy with M-cholinoblockers was ineffective, then the dose was increased or replaced with an alternative drug - a beta3-adrenoceptor agonist (Mirabegron) or their combination (beta3-adrenoceptor agonist + M-cholinoblockers) was used. To stop UI events, mirabegron, an agonist of beta3-adrenoceptors, was prescribed in OAB as the main method of treatment in women with UI, as well as in case of ineffectiveness of M-cholinoblockers and uncontrolled arterial hypertension.

Beta-3-adrenomimetics (beta (b)-adrenostimulators, beta (b)-agonists) - biological or synthetic substances that lead to the stimulation of β-adrenoreceptors have a significant effect on the main functions of the body and binding to β-receptors as a result, it leads to the separation of β1- and β2-adrenomimetics.

The basis of the modern method of treating urinary incontinence using the "Kolibri BeFit PRO" BQA complex is a system of exercises for the muscles of the pelvic cavity, aimed at increasing their tone and developing a strong reflex contraction in response to a sudden increase in intra-abdominal pressure. Special vaginal or rectal sensors record changes in the tone of the exercising pelvic floor muscles and convert them into electromyographic (EMG) signals. The EMG signals are amplified and displayed as graphic images on the monitor. At the same time, Kolibri miniature sensors simultaneously register the contraction of the large muscles of the abdomen and buttocks, and also transmit a signal to the computer. Thus, the specialist and the patient can monitor the correctness of the exercises.

The duration of the daily procedure varies between 15-20 minutes. The treatment course consists of 15 treatments. If necessary, repeated courses of BFB-therapy (2-3 times a year) can be conducted to enhance the clinical effect.

In total, 12 women with UI in OAB (5 comparison group and 7 main group) were prescribed beta-3-adrenomimetics with M-cholinoblockers in the first period of treatment. As a result, out of a total of 12 women, only 2 (3.33%; 5%) had a therapeutic effect from drug therapy and a positive result was obtained. When OAb was prescribed to 7 patients in the main group, positive dynamics were observed in all of them, and UI symptoms were completely eliminated in 3 patients.

Patients with the stressful form of UI were prescribed antidepressants as a conservative treatment and the result was evaluated after 1 month. 7 people (35%) in the comparison group and 11 people (36.7%) in the main group had UI of this form. At the same time as conservative treatment, BFB - training physiotherapeutic treatment method was applied to women of the main group. At this stage, the effectiveness of treatment was noted as positive in only 2 women (10%) in the comparison group, and in 8 women (26.7%) in the main group. At this stage, we can see that the effectiveness of complex treatment is several times higher than that of conventional treatment. The effectiveness of the BFB method has been confirmed by many clinical studies. Based on extensive analysis, our study showed that systematic training of pelvic floor muscles using the BQFB method conducted under our control compared to women of the comparison group who did not receive BFB-therapy (5%) in 6 (20%) of the main group) led to treatment in patients with mixed type UI ($P<0.01$).

Conclusion. It is effective to develop a treatment strategy for patients with OAB depending on its type, and conservative treatment according to the form of UI and the use of BFB can be promoted as the most effective way to treat OAB in patients. According to it, it is appropriate to use antidepressants in stressful UI, m-cholinoblockers and beta-3-adrenomimetics, duloxetine in urgent UI and mixed UI in OAB.

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