
Possibilities for the Treatment of Detrusor Hyperactivity

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Resume: The article discusses the prospects for conservative treatment of an overactive bladder associated with detrusor overactivity. The study was conducted on the basis of the gynecological and urological departments of the clinic No. 1 of the Samarkand State Medical University. The aim of the study was to improve the methods of conservative treatment of overactive bladder in the analysis of the effectiveness of β 3-adrenergic agonists. The study included 30 patients who received drug therapy with mibegron. The control group consisted of 20 patients not taking this drug. After treatment, patients noted a decrease in the number and severity of urgency, the number of urinations per day and episodes of urge urinary incontinence. the average number of urinations per day as a result of taking mirabegron decreased by 2.17 ± 1.22 . According to the study, it can be concluded that mirabegron is a safe and effective substance for the treatment of symptoms of urgent and frequent urination, which can be taken by patients with varying degrees of severity of such symptoms, both as monotherapy and in combination with existing drugs (anticholinergics), safely amplifying their effectiveness.

Keywords: overactive bladder (OAB), neurogenic detrusor overactivity, idiopathic detrusor overactivity, detrusor, M-anticholinergics, β 3-adrenergic receptor agonists, mirabegron.

Relevance. Overactive bladder (OAB) is a pathological condition that is expressed in urinary urgency, frequent during the day and at night (more than 8 times a day), which can be combined with urge urinary incontinence [1, 3, 10]. According to world studies, the prevalence of overactive bladder (OAB) today fluctuates on average in 11-16% of the world's population and occurs equally in both men and women. At the same time, OAB is a diagnosis of exclusion [2, 6, 8]. OAB occurs due to a complex of violations of the mechanism of urination, namely from involuntary contraction of the detrusor and an increase in intravesical pressure. Currently, there are various causes of OAB development, the most common of which include age-related changes in the detrusor, infravesical obstruction, structural changes in the muscle layer of the bladder, increased sensitivity of the bladder mucosa, etc. [4, 7, 12, 16].

The aim of the study was to improve the methods of conservative treatment of overactive bladder in the analysis of the effectiveness of β 3-adrenergic agonists.

Materials and methods of research: OAB is often a diagnosis of exclusion. In other words, it is first necessary to differentiate other, less complex, causes of frequent and urgent urination from OAB. These include acute and interstitial cystitis, stress urinary incontinence, bladder and ureteral stones, acute and chronic prostatitis, bladder cancer and tuberculosis, etc.

For the correct implementation of differential diagnosis, we conducted a number of fundamental examinations, starting with complaints and anamnesis and ending with a comprehensive urodynamic study. In the applied patients, a urination diary was studied, which recorded data on all times of urination, accompanied or not accompanied by an urgent urge, as well as all episodes of urge urinary incontinence for 72 hours. The criterion for

diagnosing OAB was: the presence of at least 2 urgent urination per day with episodes of urge urinary incontinence or without them), 8 or more urination per day. When collecting an anamnesis, it was found out the presence of head and spine injuries, neurological diseases, as well as urination disorders in previous years of life. The study included 30 patients who received drug therapy with mibegron. The control group consisted of 20 patients not taking this drug.

Results. In the anamnesis of patients, we observed complaints of chronic OAB symptoms, which are not alleviated by taking antibiotics and anti-inflammatory drugs. Clinically, this manifests itself in urinary incontinence only with a very strong urge to urinate that occurs without any precursors or stress. With stress incontinence, patients complained of leakage of urine during exertion without an urge - when coughing, laughing, lifting weights, physical activity, because of which functional tests were carried out.

From laboratory methods, a general urinalysis was used, from instrumental ultrasound of the urination organs.

OAB treatment included a three-stage algorithm consisting of lifestyle changes, drug therapy, and, if the first two were ineffective, recommendations for minimally invasive treatment methods.

The concept of lifestyle change consisted of behavioral therapy and biofeedback (BFB - therapy). In case of failure of such treatment or depending on the severity of OAB, drug therapy was resorted to - agonists of β_3 -adrenergic receptors (Mirabegron at a dosage of 50 mg/day) in patients of the main group. The duration of therapy was 12 weeks, after which the results of treatment were evaluated. The control group received only biofeedback therapy.

After treatment, patients noted a decrease in the number and severity of urgency, the number of urinations per day and episodes of urge urinary incontinence. the average number of urinations per day as a result of taking mirabegron decreased by 2.17 ± 1.22 , while in the group after BFB therapy it decreased by only 1.2 ± 2.01 ($p < 0.001$). The number of urgent urges to urinate decreased by 1.85 ± 2.555 in the main group, and by 0.85 ± 0.45 in the control group after biofeedback therapy ($p < 0.025$), the average number of episodes of urgent urinary incontinence decreased by $1.35 \pm 0, 86$. We noted an improvement in the quality of life in all patients after conservative treatment. The treatment was further supplemented by exercise therapy of the pelvic floor muscles. Patients who did not experience positive dynamics were recommended minimally invasive methods of treatment.

Conclusions. OAB significantly reduces the quality of life of patients as male as well as female. Unfortunately, in our time, despite the development of world science, the set of methods for treating OAB is still limited. Therefore, the issue of finding new drugs is very relevant. To date, mirabegron is a safe and effective substance for the treatment of symptoms of urinary urgency and frequent urination, which can be taken by patients with varying degrees of severity of such symptoms, both as monotherapy and in combination with existing drugs (anticholinergics), safely enhancing their effectiveness.

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