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The Value of TIGRALIS 5 in the Treatment of Patients with Diabetes Mellitus Complicated by Erectile Dysfunction

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Abstract

This review of the literature highlights the issues of epidemiology, classification, pathophysiology, as well as the diagnosis and treatment of erectile dysfunction in patients with diabetes mellitus. Erectile dysfunction in young patients with diabetes mellitus is a serious problem due to its fairly wide prevalence, as well as the impact on the psychological state of patients and the quality of life in general. It is emphasized that timely diagnosis with the correct definition of the form of erectile dysfunction allows reasonable and adequate selection of therapy for each individual patient.

Keywords: erectile dysfunction, diabetes mellitus, epidemiology, sexual disorders, Tigralis-5.

According to the International Diabetes Federation, more than 5.3 percent of the world's population suffers from diabetes. The incidence of diabetes in the world is growing rapidly.

According to the leading specialized centers, diabetic polyneuropathy is from 2 to 15% of patients without special selection, up to 77% of the total number of patients with elevated sugar level with special selection /1/. However, according to various sources, erectile dysfunction (ED) in patients with diabetes reaches 35-55% (3). The problem is of serious economic importance, because disability due to the severe course of the disease occurs in people of the most working age.

The purpose of the study was to develop a diagnosis of erectile dysfunction before the onset of clinical manifestations that make it necessary to consult a doctor, as well as to choose therapy in terms of pathogenesis in patients with diabetes. The pathogenesis of diabetes mellitus and erectile dysfunction is based on the common process of their endothelial dysfunction, which is determined by an imbalance in the production of endothelial signaling molecules during the transformation of the

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adaptive response of the endothelium into a maladaptive response.

Materials and methods. 66 men aged 45-60 (average age 50.4+1.3) were under our control. All patients had elevated blood sugar levels.

Tests performed: physical examination, complete blood count and urine test, glucose tolerance test, total testosterone level, thyroid stimulating hormone (TSH), laser Doppler penile flowmeter, IIEF (International Index of Erectile Function) and ICF (International activity classification) questionnaires.

Exclusion criteria were any deviations in the hormonal status of men, the presence of arterial hypertension or benign prostatic hyperplasia, previous pelvic injuries. 36 people received regular therapy for diabetes, 30 patients received periodic therapy. 50% of the studied patients received combined therapy (in various combinations: alpha-lipoic acid, insulin therapy) and 50% received monotherapy. All subjects achieved a reduction in high blood sugar levels and maintained the latter at target levels.

All patients were prescribed Tigralis-5 1 tab x 1 time to correct ED. every day for 28 days. It should be noted that the patients were included in the survey before complaining about the presence of violations in the genital area, they considered the existing violations as "normal" for their work and work routine, and did not consult a urologist themselves. accompanied by an increase in blood sugar.

Studies conducted at symmetric points were evaluated after calculating the average statistic and reflected the basal blood flow rate at 2 points for 2 minutes. The curves were processed immediately after each study using the software. The criteria of adequate blood flow to the penis were determined based on the results of a survey of a control group of 15 healthy volunteers aged 25-35 without complaints of erectile dysfunction.

Erectile dysfunction was initially defined according to the IIEF and ICF questionnaires. A laser blood microcirculation analyzer was used to assess the state of the microcirculation bed. Basal blood flow was measured using a skin sensor at two points on the penis in the region of the coronal cavity at 3 and 9 o'clock of the conventional dial. All measurements were made at the same temperature of the room, at the same time of day.

Results. All patients had a total testosterone level in the normal range, an androgen index > 70%. Patients with arterial hypertension were excluded from the study and referred to a cardiologist for correction of their condition. According to lipidograms, there were no significant deviations or data for atherosclerosis. According to the IFF questionnaire, the norm for this age group (45-60 years) is the result of 36 points. It was 23.3+2.4 points in the examined patients. At the same time, the erectile component was 3.2 +1.8 points, the copulatory function was 4.5 +1.5 points in general, and the psychogenic component was 4.3 + 2.6 points. According to the IIEF scale, the maximum score is 75;

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46.6+4.8 points in examined patients. These data are consistent with mild to moderate erectile dysfunction. Evaluation of microcirculation study results in baseline and follow-up patients.

Therefore, the presence of ED in all patients was proved, which was confirmed in addition to the subjective assessment according to the IIEF and ICF questionnaires scored, by objective data: revealed microcirculation disorders of the cavernous bodies of the penis, the presence of endothelial dysfunction. In the control after 1 month, according to the questionnaires, the total score of the ICF increased and reached normal values – up to 38.4 + 1.8, the indicators for erectile, copulative and psychogenic components increased by more than 2 times, the total score for IIEF approached the maximum of 59, 8+2.4. When analyzing LDF-grams (laser Doppler flowmetry), positive changes in the microcirculation system are evidenced by: an increase in the microcirculation index, an increase in the coefficient of variation, i.e. decrease in hypoxia and tissue ischemia, increase in blood flow into the microcirculation system, increase in the passive mechanism of blood flow regulation, increase in pulse fluctuations and increase in blood flow into the microcirculatory bed. When re-calculating the number of desquamated endothelocytes, a significant decrease in the latter to 5.43+0.9 cells/100 µl was revealed. We regarded the decrease in the content of desquamated endotheliocytes as an improvement in endothelial metabolism.

Discussions. Thus, our patients have stress-induced erectile dysfunction, endothelial dysfunction, microcirculation disorders. The use of the drug sildenafil, subject to correct insulin therapy (keeping blood sugar figures not higher than 6.0 mmol / l.), helps to compensate for erectile dysfunction, improve microcirculation. There is no doubt about the relationship between the onset and course of erectile dysfunction in patients with cardiovascular pathology, the severity of endothelial dysfunction, and, as one of its manifestations, diabetes mellitus. **Conclusions.** Treatment of ED in patients with DM should be comprehensive and aimed not only at improving erectile function itself, but also at eliminating pathogenetic factors in the development of ED, such as chronic hyperglycemia, dyslipidemia, androgen deficiency. Currently, preference is given to drug treatment methods, the leading place among which is occupied by drugs from the group of PDE-5 type inhibitors due to their high efficiency, safety and ease of use for patients. It should be noted that the drugs of this group have a neuroprotective effect, which is especially important for patients with the neurogenic form of ED. However, this issue requires further in-depth study. Thus, despite great advances in the development of methods for diagnosing and treating ED, there are still many unresolved issues that require further research.

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