

COMPLEX PATHO GENETIC TREATMENT OF TIGRALIS 5 IN PATIENTS WITH DIABETES MELLITUS COMPLICATED BY ERECTILE DYSFUNCTION

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Annotation: The incidence of diabetes in the world is rapidly increasing. According to the International Diabetes Federation, today more than 5.3% of the world's population suffers from diabetes.

Key words: Center, diabetic polyneuropathy, erectile dysfunction.

The problem acquires serious economic significance, since as a result of the severe course of the disease, disability occurs in people at the most working age.

According to leading specialized centers, diabetic polyneuropathy ranges from 2 to 15% without special selection of patients, up to 77% with special selection to the total number of patients with elevated sugar levels /1/. At the same time, according to various sources, the incidence of erectile dysfunction (ED) among diabetic patients reaches 35-55% (3).

The pathogenesis of diabetes mellitus and erectile dysfunction is based on their common process of endothelial dysfunction, which is revealed by an imbalance in the production of endothelial signaling molecules during the transformation of an adaptive response of the endothelium into a maladaptive one (2,6).

The aim of the study was to develop a diagnosis of erectile dysfunction before the onset of clinical manifestations that make one consult a doctor, as well as the selection of therapy in terms of pathogenesis in patients with diabetes mellitus.

Materials and Methods Under our supervision there were 66 men aged 45-60 years (mean age from 50.4±1.3). All patients had elevated blood sugar levels.

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

The exclusion criteria were any deviations in the hormonal status of men, the presence of arterial hypertension or benign prostatic hyperplasia, previous injuries of the pelvic organs. 36 people received regular therapy for diabetes mellitus, 30 patients received periodic therapy. 50% of the studied patients received combination therapy (in various combinations: alpha-lipoic acid, insulin therapy), and 50% -

monotherapy. All the subjects achieved a decrease in elevated blood sugar levels and the maintenance of the latter at the target level.

For the correction of ED, all patients were prescribed and Tigralis-5 1 tab x 1time. Daily 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 did not apply to the urologist on their own, considering the existing violations as “normal” for the way of work and the accompanying elevated blood sugar level.

Erectile dysfunction was initially established according to the IIEF and ICF questionnaires. To assess the state of the microcirculatory bed, a laser blood microcirculation analyzer was used. The measurement of basal blood flow was carried out using a skin sensor at two points on the penis in the region of the coronal sulcus at 3 and 9 o'clock of the conventional dial. All measurements were carried out in the same thermal regime of the room, at the same time of day.

Conducted studies at symmetrical points were evaluated after calculating the average statistical indicator and reflected the speed of basal blood flow at 2 points for 2 minutes. Using the software, the curves were processed immediately after each study. The criteria for adequate penile blood flow were determined based on the results of a survey of a control group consisting of 15 healthy volunteers aged 25-35 years without complaints of erectile dysfunction.

Results. In all patients, the level of total testosterone was in the normal range, 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.

The norm for this age category (45-60 years) according to the IFF questionnaire is the result of 36 points. In the examined patients, it was 23.3+2.4 points. At the same time, the erectile component was 3.2 +1.8 points, the copulatory function in general was 4.5 +1.5 points, and the psychogenic component was 4.3 + 2.6. According to the IIEF scale, the maximum score is 75; in the examined patients, the score is 46.6+4.8 points. These data correspond to mild to moderate erectile dysfunction.

When evaluating the results of the study of microcirculation in patients of the main and control groups, a number of calculated indicators were used: the indicator of the average blood flow M was reduced, low-amplitude pulse fluctuations, the amplitudes of slow fluctuations and vasomotor activity were compensatory increased. These data indicate the presence of a spastic form of microcirculatory disorders (5).

The number of desquamated endotheliocytes determined before treatment was 9.65+0.79 cells/100 μ l, which exceeds the normal values (3.6+0.4 cells/100 μ l) by more than 2 times. This indicates the presence of vascular endothelial dysfunction in this category of 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 μ l was revealed. We regarded the decrease in the content of desquamated endotheliocytes as an improvement in endothelial metabolism (2,4).

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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