ION OF THE TREATMENT OF CHRONIC GENERAL PERIODONTITIS IN DIABETES MELLITUS IN KARAKALPAKSTAN

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Summary: *The number of people with diabetes mellitus (DM) in the Republic of Karakalpakstan is increasing year by year. This condition increases the risk of developing other comorbidities, in particular, chronic generalized periodontitis. Periodontitis against the background of diabetes mellitus has specific clinical signs and requires updating and optimizing treatment approaches.*

Key words: *diabetes, people, study, condition increases, emotions.*

Rezyume: *Qoraqalpog‘iston Respublikasida qandli diabet (QD) bilan kasallanganlar soni yildan-yilga ortib bormoqda. Bu holat boshqa yondosh kasalliklar, xususan, surunkali umumiy parodontitning rivojlanish xavfini oshiradi. Qandli diabet fonida kechadigan parodontit o‘ziga xos klinik belgilarga ega bo‘lib, davolash yondashuvlarini yangilash va optimallashtirishni talab qiladi.*

Kalit so‘zlar: *diabet, odamlar, o‘qish, holat oshadi, hissiyotlar.*

Резюме: *В Республике Каракалпакстан число больных сахарным диабетом (СД) увеличивается с каждым годом. Это состояние увеличивает риск развития других сопутствующих заболеваний, в частности, хронического общего пародонтита. Пародонтит на фоне сахарного диабета имеет специфические клинические признаки, что требует обновления и оптимизации подходов к лечению.*

Ключевые слова: *диабет, люди, учёба, состояние увеличивается, эмоции.*

Introduction. Diabetes mellitus leads to metabolic disorders, which intensifies inflammation and destruction in periodontal tissues. The following factors exacerbate periodontitis in diabetic patients:

- Microcirculatory disorder
- Decreased neutrophil function
- Decreased collagen synthesis
- Accumulation of glucated proteins

Currently, successful treatment of periodontitis is largely oral creation of new drugs to combat the pathogenic flora of the cavity, restoration of damaged bone structures and surrounding tissues of the tooth. Recent research shows the relevance and prospects of this direction. The multifaceted etiopathogenesis of inflammatory diseases of the periodontium, oral increased sensitization of the tissues of the cavity

and the body the study and application of new drugs in the treatment of these pathologies), etc. The lack of therapeutic effectiveness of many drugs is associated with local and sometimes associated with changes of a general nature, which, in turn requires additional correction of events. Combined in these cases more attention should be paid to local etipathogenetic remedies. Research in the field of molecular biology by domestic and foreign authors the main components of the intercellular matrix - periodontal glycosaminoglycans determined the leading role of tissues in metabolic processes. More research their main role in periodontal tissue repair. (A.P. Bezrukov 2017, A.S. Grigoryan et al., 2014, L.A. Dmitriev 2016). Diabetes mellitus is a disease caused by insulin deficiency and metabolic disorders in the body. Diabetes has been known since ancient times in the history of Eastern folk medicine. Abu Ali ibn Sina paid special attention to this problem. Drinking too much water causes other diseases as well, and the patient becomes very thin. Stopping at the treatments, the physician says: "Bemorga sovuq mizojli suyuqliklar ichir, sovuqjomga sol, nordon ayron ichir, mevalar ber, yalpiz damlab ichir, ya'ni bemorni hölla, sovut." This means that the disease occurs due to excessive heat in the human body. Diabetes, according to historical medical sources, can also be hereditary. In diabetes mellitus, the amount of sugar in the blood increases sharply and is excreted in the urine (containing sugar), symptoms such as thirst, dry mouth, weight loss, weakness, itching, and others are observedHowever, due to a sharp decrease in tissue sensitivity to insulin, the absorption and use of glucose by tissues decreases and it accumulates in the blood, resulting in increased blood sugar levels that are excreted in urine, causing the patient to gain significant weight. This type of diabetes mainly affects middle-aged and elderly people. The disease develops gradually, quietly, and at its onset, symptoms such as dry mouth, thirst, and weight loss are not pronounced. The patient is most often bothered by fatigue, exhaustion, and thirst. Despite the high glucose content in the blood, an increase in acetone in the blood and its appearance in the urine are rarely observed in type 2 diabetes. Such patients may live without taking insulin. Diet, physical exercises, and sugar-lowering medications are beneficial for them.Diabetes mellitus is a lifelong disease that needs to be treated throughout life. In patients who are not fully treated and have a high blood glucose level for a long time, vascular complications of diabetes - diabetic angiopathies (macro and microangiopathies) – manifest [1].

Method. This damages the capillaries of all organs (skin, muscles, nerves, etc.). Diabetic microangiopathies are observed more frequently and earlier in the kidneys, eyes, legs, and other organs. The development of atherosclerosis in diabetes mellitus, in turn, leads to ischemic heart disease (stenocardia, myocardial infarction), cerebral

circulation disorders (dizziness, cerebral stroke), and so on. The main goal of treatment for both types of diabetes is to reduce blood sugar levels as much as possible, bringing them closer to the indicators of healthy people, i.e., achieving a state of compensation. The main way to maintain normal blood sugar levels is to determine blood glucose as quickly as possible; such control is very necessary in insulin-dependent type 1 diabetes. At home, you can independently use special reagent papers to determine blood glucose levels. For this, a drop of blood is taken from the finger using an injection needle onto a piece of reactive paper (the blood is applied to the lines on the edge of the paper). After one minute, the blood on the paper is wiped with cotton, and after another minute, the color of the reactive paper is compared with the scale. The scale indicator with the closest color represents the blood glucose level in mmol/l (mg%). Similarly, patients can independently determine urine sugar levels at home using special reagent papers. If the glucose level in the blood or urine is elevated, appropriate treatment should be administered immediately. In addition, patients should also monitor their body weight once a week and maintain it at a level corresponding to their height, age, and profession. Diabetes mellitus is a malfunction of metabolic processes caused by a decrease in insulin levels and an increase in blood sugar levels. The disease is chronic and often presents a risk of progression. Conditions caused by diabetes can lead to death (this is hyperglycemic and hypoglycemic coma).

According to statistics, diabetes mellitus is the second most common disease caused by metabolic disorders (obesity is in first place). Globally, diabetes is diagnosed in one-tenth of the population. Considering that the disease can be asymptomatic, scientists believe that the proportion of patients with diabetes is actually quite high. The Importance of Insulin - Diabetes mellitus occurs due to insulin deficiency. Disorders of protein, carbohydrate, and fat metabolism are characteristic of this disease. Insulin, which participates in carbohydrate metabolism, ensures the breakdown, synthesis, and utilization of glycogen in the liver, and also prevents the breakdown of carbohydrate compounds. During protein metabolism, insulin begins to synthesize proteins and nucleic acids, preventing the breakdown of the latter. Insulin's effect on fat metabolism is that it increases the rate of glucose entry into hepatocytes, triggers cellular energy processes, slows down fat breakdown, and improves the synthesis of fatty acids. If insulin is insufficient, sodium cannot enter the cells. Forms of the disease Diabetes mellitus can be mild, moderate, and severe in terms of severity. There are four main clinical forms of this disease:

Discussion. Type 1 diabetes mellitus (insulin-dependent). It is found in individuals up to 35 years of age and in young children. The natural production of

insulin completely stops, so it is injected continuously. Type 2 diabetes mellitus (insulin-independent). It occurs in people over forty and fifty years of age, the reason for its occurrence is the abnormal sensitivity of tissues to insulin. In this type of diabetes, sugar absorption is difficult, and injection of insulin is not required. Symptomatic (secondary) diabetes mellitus. Occurs due to another disease (for example, diseases of the pancreas). It can also occur due to long-term use of medications and genetic pathologies. Diabetes mellitus caused by improper nutrition in childhood. It is often found in people living in tropical regions.In addition, it is possible to distinguish gestational diabetes mellitus that occurs during pregnancy in women. Depending on the level of blood glucose, it is classified as follows:

• Compensatory diabetes mellitus - the patient does not complain about their health, the blood sugar level on an empty stomach does not exceed 4 mmol/l, and throughout the day does not exceed 9 mmol/l.

• Subcompensatory diabetes mellitus - no symptoms appear and blood sugar levels range from 8 to 11 mmol/l.

• Decompensatory diabetes mellitus - the patient complains of poor health, disease symptoms are detected, blood glucose level is higher than 11mmol/l.

Foto 1.

Results. Type 1 and type 2 diabetes mellitus are the most common types of the disease. The insulin-dependent form of diabetes develops as a result of the destruction of insulin-producing β-cells, as well as autoimmune damage to the pancreas. Symptoms of the disease appear in the following cases:

• after measles, viral hepatitis, parotitis;

• after toxic pesticides, nitrozamines, and medicines [2].

Such diseases can lead to the destruction of pancreatic cells, and if more than 80% of the cells are damaged, diabetes mellitus develops. If diabetes is not insulin-

dependent, then the tissues do not detect insulin, and its amount in the body may be normal or excessive. This type of diabetes can affect elderly people or those who have gained weight due to the fact that insulin cannot pass through adipose tissue. Approximately ninety percent of all patients suffer from type 2 diabetes mellitus.

If the interaction between insulin and tissues is disrupted, the blood glucose level in type 2 diabetes mellitus increases sharply, while in cells it decreases. Therefore, the body activates special mechanisms for glucose absorption, as a result of which sorbitol, glycosaminoglycans, and glycosylated hemoglobin accumulate in tissues. Sorbitol affects the development of cataracts, neuropathy, and microangiopathy, and glycosaminoglycans damage blood vessels.

To compensate for the lack of energy, the body begins to break down proteins. Muscle dystrophy develops in this way. As a result, ketones are formed in the body, which are toxic decomposition elements.

Due to the need to eliminate excess glucose from the body, the patient's daily urination increases. In addition to glucose, a large amount of fluid is also released, resulting in dehydration and insatiable thirst. Also, the body's energy reserves decrease, as a result of which a person begins to lose weight. Microcirculation is the process of blood delivery to tissues through the smallest vessels (arterioles, capillaries, and venules) and the removal of metabolic products from them. This system plays a crucial role in tissue nutrition, gas exchange, immune and inflammatory reactions.

Conclusion. Treatment of chronic periodontitis in patients with diabetes mellitus should be combined not only with local anti-inflammatory measures, but also with the control of metabolic disorders. Also, comprehensive approaches, taking into account local conditions, increase efficiency.Periodontitis is an inflammatory disease of the periodontium (the tissues surrounding the tooth) that affects layers ranging from tooth flesh to alveolar bone tissue. If not treated timely and correctly, it ends with mobility and loss of teeth.Treatment optimization is the improvement of existing methods, the introduction of new technologies, and the achievement of maximum effectiveness based on an individual approach.

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