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**PECULIARITIES OF AMYLINEMIA DEPENDING ON THE TYPE
OF DIABETES MELLITUS**

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-cell dysfunction in combination with insulin resistance are key causes for type 2 diabetes mellitus (T2DM). However, in addition to insulin, pancreatic islet cells produce another hormone, amylin, the physiological role of which is widely discussed by scientists.

The aim of the study was to determine the level of amylinemia in different types of diabetes. 145 patients with diabetes mellitus (DM) and chronic kidney disease who were treated at the Chernivtsi Regional Endocrinology Center were examined (average age of patients - 45.5 ± 1.3 years; men - 71, women - 74; diabetic history - 11.7 ± 5.5 years). Patients were divided into groups depending on the type of diabetes: the first group consisted of 40 patients with classical type 1 diabetes mellitus (T1DM), the second - 70 people with latent autoimmune diabetes in adults (LADA), the third - 35 patients with classical type 2 diabetes mellitus (T2DM). Diagnosis of diabetes was established in accordance with the recommendations of the American Diabetes Association (ADA, 2021), the diagnosis of LADA, in accordance with the recommendations of the Immunology of Diabetes Society (2005). All patients underwent general clinical studies, determination of the main indicators of carbohydrate metabolism (glucose onset, C-peptide, insulin, HOMA-IR index). The amylin content was determined by enzyme-linked immunosorbent assay using Elabscience kits (normal values 4.0-25.0 pmol/l).

In classical T1DM amylin levels did not exceed normal values and did not undergo statistically significant changes with the control group, while in patients with classical T2DM it was 10.8 times higher than in control ($p < 0.01$) and 8.3 times higher than the group of patients with classical T1DM respectively ($p < 0.01$). In the LADA group, the content of amylin in the blood serum was 9 times higher ($p < 0.01$) compared to the control group and 6.8 times higher than in the case of classical T1DM respectively ($p < 0.01$), at the same time was lower by 17.3% than in the T2DM group ($p < 0.05$). In patients with DM a direct probable correlation was observed between amylin and C-peptide, HOMA-IR index ($p < 0.05$), which confirms the relationship between increased amylin and insulin synthesis in this category of patients. In patients with LADA, there was an interrelationship between the content of amylin and insulin, C-peptide, HOMA-IR index ($p < 0.05$), which indicates the role of insulin resistance as well as the hyperamylinemia caused by it in the development and progression of this diabetes subtype. On the other hand, in classical T1DM no probable correlation between the indicators was found.

The level of amylin in classical type 2 DM and latent autoimmune diabetes in adults differs sharply from that in classical type 1 DM and is associated with the degree of insulin resistance, which indicates its role in the development of metabolic disorders in this category of patients.

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**NERVOUS CONDUCTIVITY INDICATORS IN PATIENTS WITH DIABETIC
POLYNEUROPATHY DEPENDING ON THE DURATION OF DIABETES MELLITUS**

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The most informative method of diagnosing lesions of the peripheral nervous system in patients with diabetic polyneuropathy (DPN) is electroneuromyography examination, i.e. registration of fluctuations in electrical potentials in skeletal muscle, which allows you to objectively examine the state of damage to the peripheral neuromotor system. Thus, using this method, the frequency of lesion detection of peripheral nerve function increases up to 70-90%.

48 patients with diabetes mellitus (DM) were examined (32 women – 66.7% and 16 men - 33.3%) at the age of 45-60 years (average age – 52.5 years). Stimulation electroneuromyography (ENMG) was performed on a Neuro-MVP device. ENMG was used to assess the maximum amplitude parameters of the motor M-response peculiar to the extremities muscles, the reduction of

which is a diagnostic criterion for axon damage, and to determine the rate of excitation by motor fibers of the extremities' distal nerves. Slow rate of excitation is observed in the demyelination of nerve fibers. The amplitude of the M-response was determined and the excitation rate with the motor fibers n. medianus; n. ulnaris; n. tibialis, n. peroneus was measured in patients with DPN. Patients with a duration of DM up to 1 year showed a decrease in the rate of excitation on the motor fibers n. medianus by 13.8% compared with the control, which indicates a decrease in nerve conduction due to the predominant lesion of the myelin sheath. The excitation rate of the motor fibers of a median nerve progressively decreases, depending on duration of the DM. Thus, in patients with duration of DM up to 10 years, the rate of excitation decreased by 20%, and in patients with duration of DM more than 10 years, there was a decrease in the rate of excitation on motor fibers n. medianus by 33.2% compared to control. Analysis on the indicators obtained in the study of the tibial nerve, revealed a probable decrease in the excitation rate of the motor fibers n. tibialis by 19.9% in patients with duration of DM up to 1 year compared with control. In patients with duration of DM up to 10 years the rate of excitation of the motor fibers n. tibialis decreased by 25.8%, and in patients with duration of DM more than 10 years - by 31.1% ($p < 0.05$).

Decrease in the excitation rate by motor fibers of a tibial nerve is already revealed in patients with DPN and duration of DM less than 1 year. Progression of DPN is followed by further decrease in the excitation rate. Furthermore, DPN affects more nerves of the lower extremities compared to the upper.

Piddubna . .

THE LIPID PROFILE FEATURES IN PATIENTS WITH METABOLIC SYNDROME IN COMBINATION WITH HYPOTHYROIDISM

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Metabolic syndrome (MS) is one of the priority problems in medicine and leads to negative social and medical consequences. Subclinical thyroid dysfunction can lead to the formation of MS components. Thyroid stimulating hormone (TSH) is definitely among the new contenders for the role of the component of MS.

The purpose of the study was to identify the lipid profile features in patients with MS in combination with hypothyroidism. 21 patients with MS with hypothyroidism (9 men and 12 women), aged 45 to 60 years were examined. The duration of the disease is 5.68 ± 5.23 years. All patients received basic therapy, the control group consisted of 20 healthy donors. All the main components of MS are closely related to the functional state of the thyroid gland. In addition to the active effect on energy balance, lipid and carbohydrate metabolism, body weight, thyroid hormones also affect the state of the cardiovascular system, including blood pressure (BP). According to many epidemiological studies (Whickham Survey, National Health and Nutrition Examination Survey (NHANES-111) thyroid dysfunction is quite common in the population. Diseases of the hepatobiliary system occupy about 40% of the pathology of the digestive system. Such patients make up about 20% and occupy one of the leading places in the structure of disability. Dyslipidemia is a risk factor for cardiovascular pathology in general, and hypothyroidism pathogenetically contributes to its development. Therefore, it is important for doctors to make every effort to detect the first manifestations of MS in time and take measures to correct it. Patients underwent general clinical and biochemical studies to determine the main indicators of carbohydrate, lipid, protein and mineral metabolism, determined the levels of thyroid hormones. Ultrasound of the thyroid gland, liver, gallbladder, pancreas was performed. MS was diagnosed according to the recommendations of the International Diabetes Federation (2005). To assess the lipid spectrum of the blood, the content of total cholesterol (CTC) and triglycerides (TG) was determined using standard test systems from OlvexDiagnosticum by the enzymatic method on an autoanalyzer. Statistical analysis of the study results was performed on a personal computer using the program "Statistics for Windows".