

abnormal glycogen metabolism, learning and memory, Alzheimer's disease, epilepsy, sleep and diabetes. Accumulation of water insoluble particles are derived from glycogen named Lafora bodies is called Lafora disease. Symptoms of Lafora disease begin to develop during the early adolescent years, and symptoms progress as time passes. The most common feature of Lafora disease is seizures that have been reported mainly as occipital seizures and myoclonic seizures with some cases of generalized tonic-clonic seizures, atypical absence seizures, and atonic and complex partial seizures.

**Conclusions.** Brain glycogen is not extensively utilized under normal physiology. However, since it stores three- to four-fold more glucose than is available from free glucose it may act as a buffer under physiological stressors such as hypoglycemia, hypoxia-ischemia, and sleep deprivation.

## **CURRENT THERAPIES FOR TYPE 2 DIABETES**

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**Introduction.** According to the experts of the World Health Organization: Diabetes mellitus is a problem of all ages and all countries. Currently, diabetes mellitus ranks third among the direct causes of death after cardiovascular and oncological diseases, therefore, the solution of many issues related to this disease is put in many countries of the world at the state level. There is now accumulating evidence around the world that effective control of diabetes can minimize or prevent many of its associated complications.

**Aim.** The aim of this investigation is to characterize the modern methods of therapy for type 2 diabetes mellitus.

**Materials and methods.** Special scientific literature was analyzed, and materials were used. The American Diabetes Association and the European Association for the Study of Diabetes Mellitus Consensus Statement on the Management of Hyperglycemia in Type 2 Diabetes Mellitus

**Results and discussion.** The type 2 diabetes management program includes the following ways to solve the main problems: lifestyle changes (diet therapy, exercise, stress reduction), drug treatment (oral hypoglycemic drugs, incretinimetics, insulin therapy). Objective digital criteria for compensation of type 2 diabetes mellitus are of fundamental importance. A guide to care for patients with type 2 diabetes was published, which provides criteria for compensation for the disease. It is important to

pay special attention to the need for stricter control of not only carbohydrate metabolism, but also lipid metabolism, as well as blood pressure indicators through the prism of vascular risk, or the risk of developing fatal vascular complications of type 2 diabetes mellitus. The most preferred are combinations of oral hypoglycemic drugs that act on both pathophysiological defects of type 2 diabetes mellitus (for example, metformin in combination with sulfonylurea, sulfonylurea in combination with exenatide). The most effective combination is insulin plus metformin. It is important to note that the combination therapy of insulin and thiazolidinediones is currently not approved in the EU countries.

**Conclusions.** If it is impossible to achieve or maintain "near-normal" glyceamic values using one group of drugs, the appointment of combination therapy is indicated. Taking into account the results of international studies, it is recommended to prescribe insulin therapy earlier in patients who have not reached the target glyceamic values with the help of oral glucose-lowering drugs.

## **MEDICINAL METHODS FOR PROATHEROSCLEROTIC STATES TREATMENT**

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**Introduction.** The results of modern studies demonstrate that low density lipoproteins cholesterol(LDL-Ch) and very low density lipoproteins cholesterol (VLDL-Ch) levels are the risk factor for atherosclerosis and correlate with the coronary heart disease. One of the main tasks of treatment is to lower cholesterol level, which can be adjusted by medicinal therapy.

**Aim.** The purpose of this research was to study the medicinal methods for proatherosclerotic states treatment.

**Materials and methods.** To fulfill the task, we studied the literature resources concerning the treatment of hypercholesterolemia as reason that caused proatherosclerotic states.

**Results and discussion.** Several medications that lowering cholesterol are known, particularly, statins, bile acid sequestrants and cholesterol absorption inhibitors. Statins are highly effective because of reducing the cholesterol synthesis in the liver by competitively inhibiting the 3-hydroxy-3-methyl-glutaryl-coenzyme A (HMG-CoA) reductase activity. A decrease in intracellular cholesterol concentration