MODY diabetes as an orphan disease: literature review

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BACKGROUND. Maturity-onset diabetes of the young (MODY) is the most common form of monogenic diabetes, usually diagnosed before the age of 30 years in non-obese patients with a family history of diabetes mellitus (DM). MODY is relatively rare compared to type 1 and type 2 DM, with various literature estimates affecting only 1-2 % of people with diabetes, but because it is rare, clinicians may misdiagnose it as type 1 or type 2 DM, which happens in most cases. Unlike type 1 DM patients, patients with MODY have preserved pancreatic β-cell function, so lifestyle modification in combination with glucose-lowering therapy, which in some cases may include insulin, may be sufficient interventions as treatment.
OBJECTIVE. With the help of literary sources, familiarize yourself with the classification, clinical manifestations, aspects of treatment and prognosis of the main forms of MODY diabetes.

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MATERIALS AND METHODS. Object: MODY diabetes as an orphan disease. Research method: a review of literary sources.
RESULTS. MODY is most often an autosomal dominant disease and is divided into subtypes (MODY1 to MODY14) based on genetic mutation. Subtypes 1-3 are the most common, accounting for 95 % of cases. Treatment usually includes diet, exercise, and, in some cases, insulin or oral hypoglycemic drugs. In general, the prognosis can be quite favorable, provided that carbohydrate metabolism is compensated.
CONCLUSIONS. MODY diabetes is a complex genetically determined pathology, and understanding the features of this disease, diagnosis and treatment are of great importance for patients and their families. The development of modern methods of treatment and monitoring of glucose, such as insulin pumps, 24-hour glycemic monitoring and other technologies, may improve the prognosis for patients with MODY. Each patient with MODY diabetes has individual characteristics, which leaves an imprint on the prognosis of the disease and approaches to treatment. The main goal is to maintain a normal level of glucose in the blood to avoid complications.

KEY WORDS: diabetes, MODY, monogenic diabetes, microbiome, diagnosis, treatment.