

BIOCHEMICAL BLOOD INDICATORS IN PATIENTS WITH DIABETES MELLITUS TYPE I AND II

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Annotation: Diabetes mellitus (DM) is a consequence of a disruption in the insulin regulation functions of a range of cells in the body.

The regulation disruption can be associated with a decrease in insulin production or damage to the insulin signal transduction mechanisms [1].

According to the World Health Organization experts' assessment, the number of individuals with diabetes worldwide is increasing and has already become a significant medical and social issue for the populations of many countries [2].

This is characterized by the development of micro- and macrovascular complications, leading to the occurrence of heart attacks and strokes.

According to the Ministry of Health (MOH) data, Ukraine has approximately 1,3 million individuals with diabetes, with the vast majority, more than 90,0%, being patients with type II diabetes [3].

Keywords: Diabetes mellitus, glucose, free insulin, cardiovascular diseases.

The aim of this study was to compare some physiological and biochemical indicators of patients with a diagnosis of DM type I and type II.

Within the scope of this study, we analyzed clinical and biochemical indicators of patients with DM types I and II. Three groups were formed from a total of 60 patients:

1. Patients with DM type I - 20 individuals.
2. Patients with DM type II - 20 individuals (including 13 newly diagnosed

cases).

3. A control group of 20 individuals without diabetes and obesity.

In all groups, the levels of free insulin in serum, glucose, total cholesterol, triglyceride levels, body mass index (BMI), and blood pressure were determined.

DM type II is more characteristic of older individuals with excess body weight, as indicated by the BMI, which is significantly higher than the values of healthy donors and patients with DM type I.

This type of diabetes is most often associated with arterial hypertension, as evidenced by significantly higher blood pressure levels.

Triglyceride levels in patients with DM type I were significantly lower than in healthy donors, while in patients with DM type II, due to obesity, they were significantly higher than normal values for this age group. In patients with DM types I and II, total cholesterol levels were significantly higher than in healthy donors.

Glucose levels in the load test were significantly higher than normal both fasting and after 2 hours in the blood of both groups of patients, but there was no significant difference between DM types I and II.

The etiological difference between DM types I and II is more reflected in the free insulin level. In patients with DM type I, it was significantly lower than normal, while in patients with DM type II, it was significantly higher than in healthy donors.

The most diagnostic informativeness in DM is provided by blood glucose levels in the load test and the level of free insulin.

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