METABOLOIC DISORDERS IN ELDERLY DIABETES PATIENTS

Tukin V.N., Lipunova Ye.A.
Belgorod State University
Belgorod, Russia

The purpose of the work is studying biochemical factors of blood against metabolic syndrome in diabetes patients – elderly men and women.

The object of the investigation was the blood of 20 diabetes patients (the average age of the men was 61, 7±1, 5 years; women - 63, 1±1, 3 years), the disease duration was from 7 to 34 years. As the control the blood of 20 practically healthy donors matching in sex and age was used.

The quantity of leucocytes, the concentration of glucose, total protein, cholesterol (CL), triacylglycerols (TG), low density lipoproteins (LDLP), high density lipoproteins (HDLP), urea, creatinine, also amylase, alanine aminotransferase (ALT), aspartate aminotransferase (AST) were determined in the blood by the unified methods applied in clinical laboratory diagnostics. The concentration of Na^+, K^+, Cl^-, Ca^{2+}, Mg^{2+} was determined by the method of flame atomic absorption spectroscopy (Quantum-2A, Russia). The WBC differential was developed; the intoxication leukocytic index (ILI) and allergization index (AI) were calculated.

In diabetes men-patients the glucose concentration in blood made 11, 6±1, 3 mmol/l^{-1}, women-patients - 9, 4±0, 7 mmol/l^{-1}, that is authentically higher than in the control group donors. In the diabetes men-patients' blood the concentration of CL (by 72, 7%), TG (by 43, 1%), LDLP (by 55, 4%) and K^+ (by 19, 4%) is authentically higher and the concentration of HDLP (by 14, 2%), Na^+ (by 6, 5%), Cl^- (by 5, 5%), Mg^{2+} (by 20, 6%) and Ca^{2+} (by 57, 6%) is lower. In the diabetes women-patients the content of CL (by на 70, 1%), TG (by 44, 4%), LDLP (by 63, 0%) and K^+ (by 8, 7%) is also authentically higher, and that of HDLP (by 17, 4%), Na^+ (by 5, 9%), Cl^- (by 4, 2%), Mg^{2+} (by 17, 6%) and Ca^{2+} (by 68, 9%) is lower.

As a tendency one can consider the amount decrease of amylase, ALT and the increase of creatinine, AST by 16, 0% and 6, 3%; 5, 4 and 15, 7; 6, 3 and 13, 1; 14, 9% and 54, 5% accordingly in men and women, in the blood of diabetes patients.

In the examined healthy people and diabetes men- and women-patients the average ILI values correspond to a light form of endointoxication, the AI values in the diabetes patients are authentically higher and reflect the presence of an allergic process in them.

Thus, hyperglycemia, provoking serious metabolic disorders, retains against the insulinic therapy in elderly men and women suffering from diabetes; a light form of endointoxication and the presence of allergic process have been detected.