

IMPACT OF DIABETES MELLITUS ON SERUM IRISIN LEVEL AND OTHER BIOCHEMICAL PARAMETERS

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ABSTRACT

Objective. Type 2 diabetes mellitus (T2DM) is a metabolic condition characterized by elevated blood sugar levels (hyperglycemia). Although T2DM can occur at any age, it is the most common form of diabetes and often develops in adulthood. People who have T2DM exhibit resistance to the effects of the hormone insulin, which the pancreas normally secretes to regulate blood sugar levels. The objective of this study was to measure the irisin hormone level as well as some biochemical parameters associated with T2DM.

Methods. A total of 65 T2DM patients and 60 healthy subjects as a control group were recruited in this cross-sectional study. The demographic information of the participants was obtained. Also, blood samples were collected from T2DM patients and the control group. The serum was separated from the blood samples and used for biochemical analysis. Irisin, fasting serum glucose (FBS), insulin, C-peptide, total cholesterol (TC), triglycerides (TG), high-density lipoprotein (HDL-C), low-density lipoprotein (LDL-C), and very low-density lipoprotein (VLDL-C) were the parameters measured in the patients and control groups. A fraction of blood samples was also processed for the measurement of glycated haemoglobin (HbA1c).

Results. There was a significant ($p \leq 0.01$) decrease in the irisin concentration in patients with T2DM compared to the control group. The results revealed a non-significant difference in the irisin levels between T2DM patients and the control group, based on sex, age, and BMI.

Conclusion. Irisin may be used as a measured parameter in T2DM patients, in addition to lipid profile and glucose level, to indicate the prognosis or clinical follow-up of patients.

Key words: diabetes mellitus; fibronectins; C-peptide.