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ASSOCIATION OF SERUM INSULIN-LIKE GROWTH FACTOR-1 WITH OBESITY IN TYPE 2 DIABETIC IRAQI PATIENTS AND ACUTE RENAL FAILURE

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ABSTRACT : Diabetes mellitus stands for a set of metabolic diseases that if they are not managed, they can initiate threatening life problems. This study hypothesizes that insulin-like growth factor-1 level can be used as a biomarker for early diagnosing renal problems in patients with type 2 diabetic disease. This study included 30 recently identified type 2 diabetic patients with acute renal malfunction who had an entrance in National Diabetic Center, AL-Mustansiriyah University. They have beenin the Center from October 2018 up to end of April 2019. Their age range has been (40-62) years. Comprehensive clinical investigationhas beencompleted for each patient to discount other diabetic complications like cardiac, neurologic and eye complications. About 30 healthy subjects have beendesignated as a control group that have beencompatible age with patients group. A tester of 10 milliliters venous blood has beenassembledfrom every subject after all nightfasting. Fasting serum glucose, lipid profile, insulin-like growth factor-1 levels were evaluated. A profile of serum lipid has exhibited more significant means except for high-density lipoprotein (HDL) cholesterol in diabetic patients with acute renal failure. As compared to the controls, the concentration of insulin-like growth factor-1 was significantly less in diabetic patients with p-value of 0.0001. Also, there has been a significance for negative correlation amid serum insulin-like growth factor-1 level and body mass index, fasting serum glucose, glycated hemoglobin, triacylglycerol, urea, creatinine and leptin while there has been a weighty positive correlation amid serum insulin-like growth factor-1 level and total cholesterol (TG), HDL cholesterol, and low density lipoprotein (LDL) cholesterol in patients group. Early detection for insulin-like growth factor-1 and lipid profile anomalies have roles to minimalize the hazard for expansion of cardiovascular complications for the patients with type 2 diabetic. Insulin-like growth factor-1 levels can be an advantageous indication for categorizing subjects for dangerous cardiovascular disease in the type 2 diabetics.

Key words : Diabetes mellitus, Insulin-Like Growth Factor-1, acute renal failure.

INTRODUCTION

Diabetes Mellitus (DM) represents the collection of metabolic illnesses categorized by hyperglycemia resultant from imperfections in insulin action, insulin secretion, or together (Sarkar and Meshram, 2017).

Type 2 DM can be resultant from a grouping of resistance to insulin action and a deficient compensatory insulin secretory response. Diabetes is connected with a more significant threat of mortality and morbidity from cardiovascular disease (CVD). Serum lipids are recurrently unusual and are expected to contribute to coronary artery disease risk. Individuals are at threat for the progress of particular complications including retinopathy foremost to sightlessness. Nephropathy generates renal failure and atherosclerotic heart sickness (Grundy, 1999).

Acute renal failure (ARF) stands for an annoying sickness with the great occurrence and unspecific remedial treatment. Though dialysis treatments represent up- to-date treatment basis, no convincing indication that inverses conventional renal injury or stops the expansion of chronic renal failure is found. The occurrence of end-stage kidney sickness secondary to ARF has been nearly 25% that is analogous to diabetic and hypertensive nephropathy (CY, 2007).

Hyperglycemia at the cellular level of vascular tissue makes a significant modifications number which possibly speed up the process of atherosclerotic (Ginsberg, 2000). Insulin resistance (IR) syndrome as well called metabolic syndrome is a gathering of irregularities counting changed glucose tolerance, visceral adiposity, hypertension, small levels of HDL of cholesterol (HDL-C), along with vast levels of triacylglycerol (TAG) are associated with