

# The Relation Between Serum Chemerin Level and Atherosclerosis in Type II Diabetic Patients with and Without Coronary Artery Disease

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## BACKGROUND:

Adiposity is associated with type II diabetes mellitus, and atherosclerotic coronary artery disease. Adipokines are responsible for, glucose intolerance and atherosclerotic CAD progression. The serum chemerin is one of adipokines and has a role in adipocyte metabolism, and influencing chemerin receptor.

## AIM OF THE WORK:

The aim of the present study is to find out the relation of the serum chemerin level to atherosclerosis in type II diabetic patients with and without coronary artery disease.

## PATIENTS AND METHODS:

The study was done in Cardiology department, Faculty of Medicine, Zagazig University. This study included (96) subjects who were classified into three groups: - Group (1): included 32 healthy subjects who served as a control group. -Group (2): included 32 type II diabetic patients without coronary heart disease. - Group (3): included 32 type II diabetic patients with coronary heart disease. All patients were subjected to the following: • Full history, Complete physical and clinical examination. • ECG for detecting ischemic changes. Echocardiographic assessment of resting wall motion and EF and CT coronary angiography to assess atherosclerotic CAD • Blood samples were analyzed for: 1) Fasting blood glucose level .2) 2 hours postprandial blood glucose level.3) Lipid profile (TC, TG, HDL-C,

LDL-C). 4) Liver function tests and Kidney function tests for exclusion criteria.6) Chemerin level was measured using immunosorbent assay (ELISA) kits.

## RESULTS:

There was statistically non-significant negative correlation between serum chemerin level and the following parameters (age, BMI, serum creatinine) and there was statistically non-significant positive correlation between serum chemerin level and serum albumin. Moreover, there was statistically significant positive correlation ( $P < 0.01$ ) between serum chemerin level and the following parameters (SBP, DBP, FBS, PPBS, TC, TG, LDL). However, there was statistically significant negative correlation ( $P < 0.01$ ) between serum chemerin level and HDL. Moreover, serum chemerin level is considered as a predictor marker of Coronary artery disease with cut off value = 110.5 ng / dl, Specificity 93 % and Sensitivity 88.2 %.

## CONCLUSION:

The serum chemerin is considered as one of the predictors of atherosclerotic CAD in type II diabetes mellitus and lead to early detection and management of CAD.

## KEYWORDS:

Chemerin; coronary artery disease; type II diabetes mellitus.

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