رقم البحث: (٦)

عنوان البحث باللغة الانجليزية:

Relation between Level of Transforming Growth Beta-1 and Micro-vascular Diabetic complications

إسم المجلة – سنة النشر:

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ABSTRACT

Background: Diabetes mellitus (DM) is a collection of metabolic illnesses marked by chronic hyperglycemia caused by insulin production, insulin action, or both. Diabetes is classified into three types: type 1 diabetes (T1DM), type 2 diabetes (T2DM), and gestational diabetes (GDM). Diabetic nephropathy, diabetic retinopathy, and diabetic neuropathy are examples of microvascular complications of diabetes. TGF-1 (transforming growth factor-beta 1) is one of the most important cytokines involved in the regulation of extracellular matrix (ECM) synthesis and degradation. Aim of this study: Is to illustrate the relation between the level of serum TGF-β1 in patients with type II diabetes with and without micro-vascular complications. Subjects and methods: All 90 enrolled study subjects were divided into 3 groups. Group 1: (n=30), healthy controls, group 2: (n=30) T2DM patients without microvascular complications, and group 3: (n=30) T2DM patients with microvascular complications. Those patients were collected from Fayoum University Hospital. All patients and controls are subjected to routine laboratory tests including (performed on Beckman coulter, AU-480); fasting and postprandial blood glucose, serum creatinine, glycosylated hemoglobin, and lipid profile. Serum TGF- β1 level was measured by an ELISA kit. Results: There is a statistically significant difference (*P* -value <0.03 and < 0.001) between all studied groups as regards mean FBS level with highest mean among diabetic with microvascular diabetic complications group followed by diabetic and lower mean among control. Also, there is a statistically significant higher mean of 2Hour pp level (*P* -value <0.006 and < 0.001) among diabetic with microvascular diabetic complications group followed by diabetic and lower mean among control. In addition, Also there is a very highly statistically significant difference with a higher mean of HbA1c% level (P-value <0.001) among diabetic with microvascular diabetic complications group followed by diabetic and lower mean among control.

There is a statistically significant positive correlation (*P*-value <0.05) between TGF-β1 and each of HDL, age, and creatinine levels which indicated an increase in LDL, and creatinine levels will be associated with an increase in TGF- β1 among all studied groups. There is a statistically significant difference (*P*-value <0.001) between all studied groups as regards mean creatinine level with highest mean among diabetic with microvascular complications group followed by diabetic and lower mean among control. Conclusion: This study indicated that the serum TGF-β1 level in T2DM patients with microvascular complications was significantly increased compared to T2DM patients without microvascular complications.