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Association of TGF- β 1 polymorphism with type 2 diabetes mellitus and diabetic nephropathy in Saudi patients**Alhazmi A S**

Taif University, Saudi Arabia

Introduction & Aim: Diabetic nephropathy is the common process that leads to end-stage kidney disease (ESRD). Several studies showed that TGF- β is a major anti-inflammatory cytokine involved in extracellular matrix deposition and thickening of basement membrane of glomeruli. This study is aimed to evaluate the association of TGF- β 1 gene polymorphisms (869T/C) and (509C/T) with complicated and uncomplicated type 2 diabetes mellitus.

Methods: In this study, 250 Saudi male patients were classified, 100 healthy men as control, 80 uncomplicated type 2 diabetes mellitus male patients and 70 type 2 diabetes mellitus male patients with nephropathy. Blood and urine samples were collected from all groups for measurement of plasma glucose, urea, cholesterol, triglyceride, HDL-C, urea, creatinine and TGF- β 1. In addition, a genotyping of TGF- β 1 was done.

Results: Our results showed a statistical difference in TGF- β 1 levels in all groups, also a positive correlation between hyperglycemia and HbA1c with TGF- β 1 level was detected. According to genotypes, only 869T/C genotypes were involved in susceptibility to T2DM and diabetic nephropathy. Both TC and CC genotypes were higher in T2DM patients compared with control ($P < 0.05$), while only CC was higher in diabetic nephropathic patients compared with uncomplicated T2DM ($P < 0.05$).

Conclusion: It can be concluded that increase TGF- β level could be involved in the process of T2DM development and its nephropathic complication. In addition, the TC and CC genotypes of TGF- β 1 869T/C were more susceptible to T2DM, while only CC genotype to diabetic nephropathy.

Biography

Alhazmi A S has completed his PhD from King Abdulaziz University. He is an Associate Professor in the Faculty of Applied Medical Sciences, Taif University, Saudi Arabia. He has published 19 papers in different journals.

aboteef999@hotmail.com

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