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Gamma Glutamyl Transferase (GGT) and Highly sensitive C-reactive protein (Hs-CRP) as emerging predictors of cardiovascular risk in Saudi type-2 diabetic patients

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Most type-2 diabetes (T2DM) Saudi patients remain uncontrolled, thus increasing their risk of developing cardiovascular disease (CVD). We aimed to investigate relationship between known factors associated with increased CVD risk, such as glycaemic control, components of metabolic syndrome (MS) and novel possible predictors of CVD risk namely: Serum levels of γ-glutamyl transferase (GGT) and C-reactive protein (CRP) in Saudi T2DM patients. 71 men and 82 women were recruited for the study. Anthropometric measurements and blood pressure (BP) were taken. Treatment plan was recorded. Fasting blood samples were obtained to measure glucose, glycated hemoglobin (HbA1c), lipids profile, highly sensitive (hs)-CRP and GGT. Higher mean GGT was associated with poor glycemic control, dyslipidemia, hypertension and abdominal obesity. GGT correlated significantly ($P<0.05$) directly with triglycerides in men ($r=0.401$) and Diastolic BP ($r=0.279$ for men, $r= 0.194$, for women), but inversely with high density lipoprotein-cholesterol ($r=-0.298$ for men, $r=-0.171$ for women). hs-CRP correlated with waist circumference ($P<0.05$, $r=0.312$, for men, $r=0.305$, for women), with a higher mean being found in men with poor glycemic control ($P=0.015$), hypertensive women ($P=0.030$) and abdominally obese persons ($P<0.05$). Therefore, it was concluded that since high levels of GGT and hs-CRP are associated with components of MS and poor glycaemic control, indicating increased cardiovascular risk, they should be included in routine monitoring of type-2 diabetic patients as independent risk predictors of CVD risk.

Biography

Suhad Bahijri has obtained her BSc in 1975 and her PhD in Clinical Biochemistry in 1979, both from The University College of Wales, Aberystwyth, UK. She then joined the Faculty of Medicine at King Abdulaziz University as an Assisstant Professor. Her studies helped to establish standards for infants formulas for the Saudi market. She also established Food, Nutrition, and Lifestyle Research Unit at King Fahad Medical Research Center, establishing a possible link with excessive fluoride intake and the beneficial effect of chromium on glucose tolerance and lipid profile in Saudi individuals. In 2010, she founded the Saudi Diabetes Research Group (SDRG).

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