OMICS International
conferenceseries.com

J Diabetes Metab 2015, 6:10
http://dx.doi.org/10.4172/2155-6156.C1.034

6th Global Diabetes
Summit and Medicare Expo

November 02-04, 2015 Dubai, UAE

Genetic polymorphism Q192R of paraoxonase 1 is a conventional risk factor for type 2 diabetes mellitus in a Saudi population

Imran Ali Khan
King Saud University, Saudi Arabia

Background: The paraoxonase 1 (PON1) gene polymorphism Q192R has been found to be consistent with multiple metabolic diseases comprising type 2 diabetes mellitus (T2DM). The R allele has been found to be associated with coronary artery disease and gestational diabetes in a Saudi population. Therefore, we attempted to determine the association between Q192R and T2DM in a Saudi population.

Methods: Eight hundred subjects were enrolled in this case-control study, including T2DM patients (n = 400) and control individuals (n = 400). Epidemiological, clinical, and Q192R genotype data were obtained from all the subjects included in this study. Genotyping was performed by PCR-RFLP analysis followed by 12% polyacrylamide agarose gel electrophoresis.

Results: Most of the clinical characteristics of T2DM were associated with controls, having positive association with allele and genotype frequencies between the T2DM cases and controls [R vs. Q: odds ratio (OR), 1.659; 95% confidence interval (95%CI), 1.344–2.048; p = 0.0002; RR vs. QQ; OR, 2.1; 95%CI, 1.3–3.2; p = 0.001; QR+RR vs. QQ; OR, 2.101; 95%CI, 1.583– 2.788; p = 0.0002)]. Multiple regression analysis showed positive correlation of lipid profile with genotype ($p < 0.05$).

Conclusion: The present findings provide robust evidence of PON1 Q192R polymorphism being associated with T2DM in a Saudi population.

imkhan@ksu.edu.sa