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Lack of association between a UBE2E2 gene polymorphism (rs7612463) and type 2 diabetes mellitus in a Saudi population

Khalid Khalaf Alharbi
King Saud University, KSA

The ubiquitin-conjugating enzyme E2E 2 (*UBE2E2*) gene plays an important role in insulin synthesis and secretion under conditions in which stress to the endoplasmic reticulum is increased in β -cells. In this case-control study, we have selected the rs7612462 polymorphism within the *UBE2E2* gene to identify in Saudi population with type 2 diabetes mellitus (T2DM) subjects. In total, 376 subjects with T2DM and 380 controls were enrolled in this study. We have collected 5 mL of peripheral blood from each participant for biochemical and molecular analyses. PCR-RFLP was used to generate genotypes at rs7612462 in all of the study subjects. Clinical data and anthropometric measurements of the patients were significantly different from those of the controls ($p < 0.05$). All of the subjects used in this study were non-obese ($25 < \text{BMI} < 30$). None of the alleles or genotypes of rs7612462 were associated with T2DM (OR=1.251, 95% CI=0.7703-2.034; $p=0.3641$). Our data suggest that the rs7612462 polymorphism in *UBE2E2* does not contribute to T2DM susceptibility in the Saudi population.

kharbi@ksu.edu.sa

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