

The Distribution of rs5219 Polymorphism in the Non-Diabetic Elderly Jordanian Subject

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Abstract : Conflicting studies on the association between the rs5219 polymorphism and type 2 diabetes, some studies have confirmed a strong relationship between this variant and type2 diabetes, on the other hand, many studies denied the existence of this association. This study aimed to provide evidence about whether the rs5219 polymorphism has or hasn't a role as a risk factor for diabetes and meta-analysis to investigate the role of the control age group in the association. Genotyping of the rs5219 polymorphism was performed in a cohort of 266 healthy elderly subjects with a mean age (60.2 ± 5.1) with no history of diabetes ($HbA1c < 6\%$) using standard Sanger sequencing methods. Lys/Lys alleles were detected in 20 persons (7.5%), Lys/Glu alleles in 96 persons (36.1%), and Glu/Glu in 150 persons (56.4%). The genotype distribution was consistent with Hardy-Weinberg equilibrium ($P = 0.7$). Meta-analysis notably indicates no association between rs5219 polymorphism and type 2 diabetes in all studies used the younger age of the control group compared to the patient's age. In conclusion, our study sheds light on the importance of age factor among the control group recruited in case-control studies.

Keywords : Type 2 diabetes, rs5219 polymorphism, E23K, KCNJ11 gene

Conference Title : ICED 2020 : International Conference on Epidemiology of Diabetes

Conference Location : Sydney, Australia

Conference Dates : March 26-27, 2020