Association analysis of −429T/C and −374T/A polymorphisms of receptor of advanced glycation end products (RAGE) gene in Malaysian with type 2 diabetic retinopathy

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ARTICLE INFO

Article history:
Received 16 July 2011
Received in revised form
31 October 2011
Accepted 7 November 2011
Published online 9 December 2011

Keywords:
Diabetic retinopathy
Polymorphism
RAGE

ABSTRACT

Conflicting results have been reported in different populations on the association between two particular RAGE gene polymorphisms (−429T/C and −374T/A) and retinopathy in diabetic patients. Therefore this study was designed to assess the association between both gene polymorphisms with retinopathy in Malaysian diabetic patients. A total of 942 type 2 diabetic patients (717 without retinopathy [INR] and 225 with retinopathy [EXR]) and 235 healthy controls were included in this study. Genomic DNA was obtained from blood samples and the screening for the gene polymorphisms was done using polymerase chain reaction-restriction fragment length polymorphism approach. Overall, the genotype distribution for both polymorphisms was not statistically different (p > 0.05) among the control, INR and EXR groups. The −429C allele frequency of the INR group (12.0%) was not statistically different (p > 0.05) when compared to EXR group (15.1%) and healthy controls (14.6%). The −374A allele frequency also did not differ significantly between the control and EXR groups.