Abstract

INTRODUCTION:

Diabetic retinopathy (DR) results from interactions between genetic and environmental factors. We were interested in the endothelial nitric oxide gene (eNOS), given the involvement of this enzyme in functional alterations in the retinal microvasculature in diabetes. The goal of our study was to assess the association of T-786C endothelial nitric oxide synthase (eNOS) gene polymorphism with diabetic retinopathy in the Algerian population.

PATIENTS AND METHODS:

Our study enrolled 110 patients with and without DR. All subjects were genotyped for the T786C eNOS polymorphism using the PCR-RFLP method. We also investigated the association between this polymorphism and certain clinical and laboratory characteristics of patients with DR.

RESULTS:

A significant increase in the frequency of the CC genotype is noted in subjects without DR (P=0.03). We also report a significant increase in the frequencies of the TT+TC genotypes in individuals with DR (P=0.03). However, the association between the different genotypes and clinical or laboratory profiles in patients with DR reveals that the NO level is lower in subjects carrying the TT genotype (P=0.039).

CONCLUSION:

Our preliminary results suggest that the CC genotype could confer protection from type 1 diabetic retinopathy in the Algerian population, while the T allele seems to confer susceptibility.