



Association of an Endothelial Nitric Oxide Synthase Gene Polymorphism with Diabetic Retinopathy

Sibel Inan¹, Nazmi Zengin², Banu Turgut Öztürk³, Hürkan Kerimoglu²,
Ali Ünlü⁴ and Ismet Dogan⁵

¹*Afyon Kocatepe University Medical School Department of Ophthalmology, Afyonkarahisar, Turkey*

²*Necmettin Erbakan University Medical School Department of Ophthalmology, Konya, Turkey*

³*Selçuk University Medical School Department of Ophthalmology, Konya, Turkey*

⁴*Selçuk University Medical School Department of Biochemistry, Konya, Turkey*

⁵*Afyon Kocatepe University Medical School Department of Biostatistics, Afyonkarahisar, Turkey*

KEYWORDS Genotype. Hyperglycaemia. Macular. Edema. Severity

ABSTRACT The association of the endothelial nitric oxide synthase (eNOS) G894T gene polymorphism with the severity of diabetic retinopathy (DRP) and macular edema (DME) was investigated. One hundred-seven patients with type-2 diabetes mellitus were included. Forty-five patients served as a control group. eNOS G894T gene polymorphism was analysed by polymerase chain reaction. The mean age was 55.8±9.4 years in the study group and 51.8±9.7 years in the control group. There was no significant difference in the genotypes between the diabetic and the control group, or between the non-DRP group and the DRP group. The frequency of the G allele was higher in the proliferative DRP group than that in the non-proliferative DRP group. The GG genotype of G894T gene polymorphism was associated with macular edema and hyperglycaemia. The eNOS G894T gene polymorphism seems to be associated with the DME and unregulated hyperglycaemia.