

Angiotensin-I Converting Enzyme Polymorphism and Diabetic Nephropathy in North India

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ABSTRACT Diabetic nephropathy represents a major complication in patients with either type I or type II diabetes. The contribution of a 287 bp insertion/deletion (I/D) polymorphism of the gene encoding angiotensin-I converting enzyme (ACE) has been investigated and the deletion type is documented to be a risk factor in the development of this disease. The present study was designed to determine the relationship between this polymorphism and the risk of developing advanced form of diabetic nephropathy (end stage renal disease) in type II diabetic patients from North India, known to have a high incidence of diabetes and hypertension. Polymerase chain reaction was employed to genotype the DNA isolated from peripheral blood of age and sex matched 117 subjects (59 diabetic nephropathy patients and 58 normal healthy controls). All the subjects, identified as DD, were reconfirmed with an insertion-specific primer. There was no significant difference in the distribution of DD, ID and II genotypes between diabetic nephropathy (10, 32, 17) and normal healthy subjects (9, 33, 16), respectively. The D allele frequencies within patient (0.441) and control (0.440) populations were very similar. The findings of the present study strongly suggest that I/D polymorphism of ACE gene is not implicated in the diabetic nephropathy of North Indian patients.