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PRINT: ISSN 0972-3757 ONLINE: 2456-6360

Int J Hum Genet, 4(1): 61-64 (2004)

DOI: 10.31901/24566330.2004/04.01.09

Lack of Association Between TNF α -308 Polymorphism and End Stage Renal Disease in North Indian Population

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KEYWORDS TNF- α ; ESRD; polymorphisms; SNP

ABSTRACT Cytokines, play a critical role in the pathophysiology of End Stage Renal Disease (ESRD). Tumor necrosis factor, TNF- α , is a multifunctional cytokine implicated in modulating the progression of ESRD. The promoter of TNF- α gene has many biallelic variations but the one at -308 (G-308 A) relative to transcription start site has extensively been studied and reported to have implications in acute and chronic rejection after renal transplant, the best renal replacement therapy available to ESRD patients. The present study was undertaken to evaluate the role of a single nucleotide polymorphism at -308 site in the promoter of TNF- α gene in ESRD in North Indian population. Samples from 111 diabetic nephropathy patients with ESRD and 164 random controls were genotyped using amplification refractory mutation system analysis for this polymorphism. The two groups revealed no significant differences with respect to the distribution of -308 polymorphic genotypes or allele frequencies. The data strongly suggest a lack of association between TNF- α -308 polymorphism and ESRD in the North Indian population and lend support to the argument that the association of A allele (high TNF- α producer) with transplant rejection may reside with the involvement of this allele in the process of rejection.

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