Title: Evaluation Mannose-binding lectin gene and promoter polymorphism in renal transplant recipients

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Abstract: Introduction: The Aim of present study was to determine the distribution of the alleles of mannose-binding lectin gene and promoter variants in renal transplant recipients and seek correlation between these variants and diseases that cause renal dysfunction.

Method: One hundred and thirteen renal recipients samples were compared with 120 normal controls from Azarbaijan population of Iran. Blood samples were obtained from renal recipients who received a kidney between March 2004 and July 2005. Mannose-binding lectin genotypes were investigated by polymerase chain reaction and restriction fragment length polymorphism.

Results: Allelic and genotypic frequency of the polymorphism at position -550, -221, +4 and at codon 52, 54 and 57 did not show statistical differences between recipients and controls (P >0.05) but significant frequency of allele B (codon 54) (P=0.02) and Lx haplotype (P=0.002) of promoter was observed in this patients.

Conclusions: Our findings provide evidence that presence of different alleles and haplotypes that cause low concentration of mannose-binding lectin in serum is a risk factor for susceptibility to renal infections that cause renal dysfunction.

Polymorphism, Renal transplant, MBL, PCR.

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