Haplotypes of *MBL2* Gene is Associated with Thrombocytopenia in Dengue Infection

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Dengue is an acute viral disease with a wide clinical presentation. Innate immune molecules that recognize pathogens are candidate to have important role in the dengue progress disease. The Mannose binding lectin (MBL) is a pattern antigen recognition molecule and its deficiency has been associated to susceptibility for several infections. The MBL deficiency is related to single nucleotide polymorphisms (SNPs) of the *MBL2* gene, present in the promoter (H/L and X/Y) and structural (A/O) regions. The aim of this study was to investigate the influence of the SNPs of *MBL2* in the thrombocytopenia development of patients with dengue. Genotyping was performed using Real Time PCR technique. Were enrolled 229 patients with dengue, which were separated in two groups: with or without thrombocytopenia. The allele X frequency in patients with thrombocytopenia was 16.5% and in patients without thrombocytopenia was 32.4% when compare to wild allele Y, with frequency of 83.5% and 67.6%, respectively (p=0.0360 OR 2.42 IC 1.05-5.48). Regarding genotype, the X/X had a frequency of 3.3% in patients with thrombocytopenia and 17.6% in patients without thrombocytopenia when compare to wild genotype Y/Y 70.3% and 52.9%, respectively (p=0.0253 OR 7.10 IC 1.21-39.03). The haplotypes for lower production of MBL have shown a protective factor for the thrombocytopenia development (p=0.0332 OR 4.50 IC 0.95-29.33). The data suggests the allele X, genotype X/X and haplotypes for low production of MBL as a protective factor for thrombocytopenia development in dengue infection.

Word Keys: Dengue, MBL2, polymorphism, SNP, thrombocytopenia

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