Cytokine (Il-10, il-6, tnf-a and tgf-ß1) gene polymorphisms in chronic hepatitis c virus infection among Malay male drug abusers

ABSTRACT

Cytokines play an important role in modulating inflammation during viral infection, including hepatitis C virus (HCV) infection. Genetic polymorphisms of cytokines can alter the immune response against this infection. The objective of this study was to investigate the possible association between chronic hepatitis C virus infection susceptibility and cytokine gene polymorphism for interleukin-10 (IL-10) rs1800896 and rs1800871, interleukin 6 (IL-6) rs1800795, TNF-α rs1800629, and TGF-β1 rs1800471 in Malay male drug abusers. The study was conducted on 76 HCV-positive (HP) male drug abusers and 40 controls (HCV-negative male drug abusers). We found that there were significant differences in the frequencies of genotype for IL-10 rs1800871 ($p = 0.0386$) and at the allelic level for IL-10 rs1800896 A versus G allele ($p = 0.0142$) between the HP group and the control group. However, there were no significant differences in gene polymorphism in interleukin 6 rs1800795, TNF-α rs1800629 and TGF-β1 rs1800471. These findings suggest significant associations between gene polymorphism for IL-10 rs1800871, IL-10 rs1800896 (at the allelic level) and susceptibility to HCV infection among Malay male drug abusers.