ABSTRACT. The aim of this study was to investigate the role of T-helper cell (Th)1/Th2 cytokines in the chronicity of hepatitis C virus (HCV) infection and the outcome of interferon (IFN) alpha therapy. A total of 30 patients with chronic hepatitis C were enrolled in the study. The levels of Th1/Th2 cytokines were determined. The differentiation of HCV genotypes was determined by direct sequencing. HCV RNA loads were detected by fluorescence quantitative polymerase chain reaction (qPCR). In chronic hepatitis C, the levels of interleukin (IL)-2 and transforming growth factor (TGF)-β significantly decreased, and IL-5 and IL-18 levels increased compared with normal controls. The IL-6 serum levels were directly proportional to the serum levels of alanine aminotransferase, and were inversely proportional to the HCV RNA loading levels. Patients with severe hepatitis C had higher levels of IL-4, IL-6, and IL-1β compared to milder cases. Patients with genotype 1 showed higher serum levels of IL-6 than those with
genotype 2. The levels of IL-2 and IL-18 showed a decreasing tendency, whereas TGF-β, IL-6, and IL-1β showed an increasing tendency over time. There was no difference in any cytokines detected between the response and nonresponse groups before IFN therapy. However, the IFN-γ level increased after IFN therapy in the response group. There was no correlation between the Th1/Th2 cytokine levels in the serum before IFN treatment and in the outcome of IFN therapy. Increasing IFN-γ levels in the serum induced by IFN treatment is associated with systemic vascular resistance.

**Key words:** Th1/Th2 cell; Cytokine; Serum; Chronic hepatitis C; Pathogenesis; Interferon