

The Impact of HBV Infection in Liver Transplant Patients with Cryptogenic Cirrhosis

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Background & Objectives: Cryptogenic cirrhosis is referred to cirrhosis with undetermined cause in liver transplant patients. Chronic hepatitis viruses and especially HBV for the potential of chronic and occult presentation has an important role in pathogenesis of the cryptogenic cirrhosis in a large proportion of liver transplant patients. Based of earlier findings the molecular and immunologic ability of HBV infection in introducing of cryptogenic cirrhosis was evaluated in Iranian liver transplant patients.

Methods: In this study 126 liver transplant patients including: 48 cases with cryptogenic cirrhosis and 78 patients with determined cause of cirrhosis were analyzed. The presence of HBsAg was evaluated in liver tissues and plasma samples collected from transplant patients with cryptogenic cirrhosis and patients with determined cause of cirrhosis by immunohistochemistry and ELISA protocols, respectively. Also the presence of HBV genome in plasma and tissue samples was evaluated by a qualitative PCR protocols in both cirrhotic patients.

Results: The prevalence of HBsAg in plasma samples of patients with cryptogenic cirrhosis and patients with determined cirrhosis was 33.3% and 51.3%, respectively. The HBsAg was not found in liver tissues of patients with cryptogenic cirrhosis. But 45.1% of liver tissues of patients with determined cause of cirrhosis were infected with HBsAg. The HBV genome was diagnosed in 39.6% of liver tissues and in 56.3% of plasma samples collected from patients with cryptogenic cirrhosis. On the other hand the HBV-DNA was detected in 59% of liver tissues and in 48.7% of plasma samples of patients with determined cause of cirrhosis.

Conclusion: Diagnosis of high prevalence of HBV genome in both patients with cryptogenic cirrhosis and with determined cause of cirrhosis and also no diagnosis of HBsAg in liver tissues of patients with cryptogenic cirrhosis, re-emphasized on the determinative role of HBV infection in pathogenesis of cryptogenic cirrhosis in liver transplant patients.

Keywords: Cryptogenic Cirrhosis; HBV Infection; Liver Transplant