The Natural History of Hepatitis C Virus (HCV) Infection

Stephen L. Chen 1,2 and Timothy R. Morgan 1,2
1. Gastroenterology Section, VA Medical Center, Long Beach, California. 2. Division of Gastroenterology and Hepatology, University of California-Irvine, Irvine, California

Abstract:

Hepatitis C virus (HCV) is a leading cause of chronic liver disease, cirrhosis, and hepatocellular carcinoma, as well as the most common indication for liver transplantation in many countries. Although the incidence of hepatitis C infection has dramatically decreased during the past decade, the worldwide reservoir of chronically infected persons is estimated at 170 million, or 3% of the global population. There is much controversy surrounding the natural history of hepatitis C infection. The rate of chronic HCV infection is affected by a person's age, gender, race, and viral immune response. Approximately 75%-85% of HCV-infected persons will progress to chronic HCV infection, and are at risk for the development of extrahepatic manifestations, compensated and decompensated cirrhosis, and hepatocellular carcinoma (HCC). The rate of progression to cirrhosis is highly variable, and is influenced by several factors, including the amount of alcohol consumption, age of initial HCV infection, degree of inflammation and fibrosis on liver biopsy, HIV and HBV coinfection, and comorbid conditions. An estimated 10%-15% of HCV-infected persons will advance to cirrhosis within the first 20 years. Persons with cirrhosis are at increased risk of developing HCC. An understanding of the natural history of hepatitis C is essential to effectively manage, treat, and counsel individuals with HCV infection.

Key Word: Natural history, acute, chronic, hepatitis C, liver fibrosis, cirrhosis, hepatocellular carcinoma, HCV, HCC