

## Effect of Hepatitis B and C Virus Infections on Mortality in the Korean Dialysis Patients: a Prospective Multicenter Cohort Study

Eugene Kwon<sup>1</sup>, Jang-Hee Cho<sup>1</sup>, Hye Min Jang<sup>2</sup>, Yon Su Kim<sup>3</sup>, Shin-Wook Kang<sup>4</sup>  
 Chul Woo Yang<sup>5</sup>, Nam-Ho Kim<sup>6</sup>, Hyun-Ji Kim<sup>1</sup>, Jeung-Min Park<sup>1</sup>, Ji-Eun Lee<sup>1</sup>  
 Hee-Yeon Jung<sup>1</sup>, Ji-Young Choi<sup>1</sup>, Sun-Hee Park<sup>1</sup>, Chan-Duck Kim<sup>1</sup>, Yong-Lim Kim<sup>1</sup>

Department of Internal Medicine<sup>1</sup>, Kyungpook National University School of Medicine

Department of Statistics<sup>2</sup>, Kyungpook National University

Department of Internal Medicine<sup>3</sup>, Seoul National University College of Medicine

Department of Internal Medicine<sup>4</sup>, Yonsei University College of Medicine

Department of Internal Medicine<sup>5</sup>, The Catholic University of Korea College of Medicine

Department of Internal Medicine<sup>6</sup>, Chonnam National University Medical School

Clinical Research Center for End Stage Renal Disease (CRC for ESRD) Investigators

**Background:** The role of HBV and HCV infections in survival among dialysis patients remains incompletely understood. This study investigated the prevalence of hepatitis B or C infection and its impact on survival in Korean patients on maintenance dialysis.

**Methods:** The study included 3,321 maintenance dialysis patients who underwent hepatitis B antigen (HBsAg) and HCV antibody (Ab) testing from a multicenter prospective cohort study in Korea. HBsAg-positive and HCV Ab-positive patients were matched to hepatitis virus-negative patients using propensity score by a ratio of one to two. We compared the survival of HBsAg and HCV Ab-positive patients to that of hepatitis virus-negative patients.

**Results:** A total of 221 (6.7%) HBsAg-positive and 108 (3.7%) HCV Ab-positive patients were enrolled and followed up for mean 23.5±13.3 months. Patients with dialysis vintage of ≥10 years showed a significantly higher prevalence of HBV and HCV than patients with dialysis vintage of <1 year (HBV 10.2% vs. 5.6%, p=0.011 and HCV 7.5% vs. 3.3%, p=0.003, respectively). After propensity score matching, the cumulative survival was not different between HBsAg-positive and hepatitis virus-negative patients (p=0.370). However, HCV Ab-positive patients showed a significantly lower survival than hepatitis virus-negative patients (p= 0.026).

**Conclusions:** The prevalence of HBV and HCV increases with the time on dialysis. HCV infection in maintenance dialysis patients is associated with an increased risk of mortality.

**Key Words:** B형 간염, C형 간염, 투석, 생존율

Hepatitis B virus, Hepatitis C virus, Dialysis, Survival