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**MORTALITY IN HEPATITIS C VIRUS (HCV) INFECTED BLOOD DONORS: A LARGE, RETROSPECTIVE COHORT STUDY**

L. Murphy

*Univ California San Francisco and BSRI, San Francisco, CA, United States of America*

**Background:** Hospital-based studies of HCV infection report frequent cirrhosis and liver carcinoma, but most prospective studies have not shown increased mortality. Better definition of HCV mortality is important in counseling infected blood donors and for public health policy.

**Objective:** To determine whether HCV seropositivity is associated with an increased rate of death.

**Methods:** We formed a retrospective cohort of RIBA-confirmed, HCV seropositive, allogeneic blood donors tested in 1991-2002, and a comparison group of allogeneic donors matched for date of donation, age, gender and zip code. Vital status through 2003 and cause of death were obtained via linkage to the U.S. National Death Index, and hazard ratios (HR's) and 95% confidence intervals (CI's) were calculated using survival analysis.

**Results:** We studied 10,259 HCV+ and 10,259 HCV- donors with mean follow-up of 7.7 years. At the time of donation, donors were middle-aged (74% aged 30 to 49); mostly male (65%); and of mixed race (73% Caucasian, 10% Hispanic, 8% African-American and 6% Asian). There were a total of 601 deaths: 453 HCV+ and 148 HCV-, for an all-cause HR = 3.11, 95% CI 2.58-3.74. Excess mortality in the HCV positive group was concentrated in the liver (88 HCV+, 2 HCV-, HR = 44.73), trauma/ suicide (106 HCV+, 36 HCV-, HR = 2.99) and drug/alcohol (64 HCV+, 6 HCV-, HR = 10.79) causes of death. Cardiac mortality was also associated with HCV (HR = 1.98, 95% CI 1.32-2.97).

**Conclusion:** HCV infection is associated with a significant, three-fold increase in all-cause mortality among former blood donors, and very strongly associated with liver-related deaths. Excess deaths due to trauma/suicide and drug/alcohol related causes are likely lifestyle related and potentially preventable. The association with cardiac death is intriguing but requires further study.