

SPONTANEOUS CLEARANCE OF HEPATITIS C VIRUS IN A COHORT OF PATIENTS ENROLLED IN A HARM REDUCTION CLINIC IN NEW BRUNSWICK, CANADA: 2014-2018

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Background: Spontaneous clearance (SC) of hepatitis C virus (HCV) is a well-documented phenomenon that has significant individual and public health implications. Several factors are associated with an increased likelihood of HCV SC, including younger age, gender, hepatitis B virus (HBV) co-infection, and presence of the rs12979860 CC genotype. Injection drug use (IDU) and excessive alcohol consumption have been associated with a lower likelihood of SC. A general analysis of these factors has not yet been performed for Saint John, New Brunswick, and the surrounding area.

Methods: Data were extracted from the Hepatitis C Positive and At-Risk (HEAR) database on all HCV antibody-positive patients enrolled between April 2014 and May 2018 at a community-based harm reduction clinic. Patients were stratified into those with SC and those with chronic HCV infection, and were compared using Fisher's exact tests for significant differences in baseline characteristics.

Results: In total, 219 patients were included, of which 20 (9.1%) experienced SC of their HCV infection. Age ($p=0.102$), history of alcohol use ($p=0.548$) and IDU ($p=0.467$) did not significantly differ between groups; however, the proportion of women among those with SC was significantly higher than the proportion of women among those with chronic HCV infection (60.0% vs. 27.6%, $p=0.003$). No individuals were HBV co-infected.

Conclusion: Consistent with previous research, our study found that women have a higher rate of SC than men—a phenomenon that is thought to be estrogen-receptor mediated. In contrast with prior research, age and IDU were not significant factors in SC of HCV. Diligent collection and analysis of local epidemiological factors implicated in SC of HCV may improve care for at-risk and affected individuals.

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