**INTERMITTENT INJECTING DRUG USE AND HCV INCIDENCE IN AN OBSERVATIONAL COHORT STUDY OF PEOPLE WHO INJECT DRUGS IN MONTRÉAL, CANADA**

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**Background:** Injecting drug use has been characterized by episodes of injection cessation and relapse. The objective was to assess the association between intermittent injecting drug use and hepatitis C (HCV) transmission.

**Methods:** Between 03/2011 and 12/2014, HCV RNA-negative participants enrolled in HEPCO were tested for HCV and completed an interviewer-administered questionnaire eliciting information on sociodemographics, drug use and related behaviours and treatment utilization at 3-month intervals. Injecting drug use in the past 3 months was categorized as injecting within 0 (no use), 1 or 2 (intermittent use) or 3 months (continuous use). HCV infection was investigated among anti-HCV-negative (primary infection) and anti-HCV-positive participants (reinfection/recurrence), and was estimated to occur at the midpoint between two visits. Cox regression analyses with time-dependent covariates were performed.

**Results:** 311 participants with ≥1 follow-up (mean age 40 years, 82% male, 47% anti-HCV positive) contributed 1,689 visits. HCV incidence was 11.3 per 100 person-years [95% confidence interval (95%CI) 8.8-14.4]. At baseline, 188 (60%), 79 (25%) and 44 (14%) participants reported continuous, intermittent and no injecting drug use in the past 3 months, respectively. In univariate Cox models, intermittent and no injecting drug use were significantly associated with a reduced likelihood of getting infected [intermittent use: hazard ratio (HR) 0.36, 95%CI 0.17-0.77; no use: HR 0.23, 95%CI 0.09-0.58] compared to continuous use. In models adjusted for age, gender and opioid substitution treatment, associations remained statistically significant for both intermittent (HR 0.40, 95%CI 0.19-0.86) and no use (HR 0.30, 95%CI 0.12-0.77). There was no effect modification by anti-HCV status at baseline.

**Conclusion:** Intermittent injecting drug use was associated with a reduced likelihood of HCV infection. Findings bring new public health and clinical perspectives regarding injecting drug use profiles and their relation to HCV risk. Further work is needed to contextualize intermittent use in the injecting drug use trajectory.

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