**HEPATITIS C REINFECTION FOLLOWING SUSTAINED VIROLOGICAL RESPONSE – A SEVEN YEAR FOLLOW-UP OF NORWEGIAN PATIENTS INFECTED THROUGH INJECTING DRUG USE**

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**Background**: On-going risk behaviours can lead to hepatitis C virus (HCV) reinfection following successful treatment. Here we aimed to assess the incidence of persistent HCV reinfection in a population of people who inject drugs (PWID) who had achieved sustained virological response (SVR) seven years earlier.

**Methods**: In 2004-05 we performed a multicentre treatment study comprising 428 mono-infected HCV genotype 2 or 3 patients in the Scandinavian countries (North-C trial). Two thirds were PWID who all had been abstinent from injecting drug use (IDU) at least six months prior to treatment. This follow-up study was performed in 2012-14 and all Norwegian patients who had obtained SVR (n=161) were eligible for participation. Clinical, laboratory and behavioural data were collected from 22 study sites.

**Results**: Follow-up data were available in 138/161 (86%) individuals. Of 94 individuals with IDU prior to treatment, 37 (39%) had relapsed to IDU after treatment. Recurrence of HCV RNA was identified in 12 of 94 (13%) PWID, with all cases occurring among those who had relapsed to IDU. The incidence of persistent HCV reinfection was 1.8/100 PY (95% CI 1.0-3.3) among individuals with IDU prior to treatment and 5.3/100 PY (95% CI 3.0-9.4) among those who had relapsed to IDU. While low education level was the only baseline factor associated with reinfection (OR 3.83; 95% CI 1.1-15.2), younger age (aOR 0.90 per increasing year; 95% CI 0.84-0.96) and low education level (aOR 4.12; 95% CI 1.57-10.8) were associated with relapse to IDU.

**Conclusion**: In this long-term follow-up of PWID who had been abstinent from IDU before HCV treatment, relapse to IDU with subsequent HCV reinfection was common. Reinfection should be systematically addressed and prevented when providing HCV care for PWID. However, treating patients at high risk of transmitting HCV may prove prevention benefit in a public health perspective.

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