**PREVALENCE AND DETERMINANTS OF LIVER DISEASE AMONG PEOPLE WHO USE DRUGS IN AMSTERDAM, THE NETHERLANDS**

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**Background:** In Amsterdam, Hepatitis C virus (HCV) incidence peaked in 1980s, when >85% of people who use drugs (PWUD) tested anti-HCV positive. As chronic HCV infection may lead to severe liver fibrosis and cirrhosis 20-30 years after infection, we hypothesized that HCV-related disease is now common among PWUD in Amsterdam. We aimed to assess the prevalence and determinants of liver disease among PWUD from the Amsterdam Cohort Study (ACS).

**Methods**: Transient elastography(FibroScan) was used to determine liver stiffness presence (<7.65 Metavir:F0-F2 (no/mild); >=7.65-<13 Metavir:F2-F3/4 (moderate); >=13 Metavir:F4 (cirrhosis).PWUD wereexamined in two waves. First, in 2011-2012, we included HCV-RNA+ PWUD from the ACS and PWUD referred from addiction care to the HCV-outpatient clinic linked to the ACS. During the second wave, 2015-2016, we included ACS participants, irrespective of HCV status. We assessed the association between moderate/severe liver stiffness and duration of excessive alcohol use (>=5 glasses/day), HIV status, HCV status (HCV-antibodies and RNA positivity) and duration, current BMI, duration of drug use, sex, age and ethnicity using multinominal logistic regression.

**Results:** Among 127 PWUD, median liver stiffness was 6.7 kPA (Interquartile-range: 4.5-11.9); 26% had evidence of moderate and 24% had severe liver stiffness. Prevalence of cirrhosis was higher among PWUD included during the first wave (29%, 29/99) than PWUD from the second wave (7%, 2/28, of whom 48% was HCV negative). Being HCV-positive and longer HCV-infection duration were significantly associated in univariable analysis with liver stiffness. In multivariable analysis among HCV-positive PWUD only, longer duration of excessive alcohol use (>=3 years) was significantly associated severe liver stiffness/cirrhosis (AORmoderate=0.9;95%CI=0.2-3.6; aORcirrhosis=5.4;95%CI=1.3-22.0), while duration of HCV infection was not (p=0.16).

**Conclusion:** We found a high prevalence of liver disease, especially among HCV-positive PWUD. Increased HCV-treatment uptake and interventions to reduce alcohol use are needed to reduce the risk of liver disease among PWUD in Amsterdam.