Paris, 25 July 2017

Press release

HIV/HCV co-infection: effects of coffee intake and cannabis use on the liver

Two studies in HIV/HCV co-infected patients participating in the ANRS CO13-HEPAVIH cohort suggest a lower risk of liver fibrosis in patients who drink at least three cups of coffee a day, irrespective of their alcohol consumption, and a lower risk of hepatic steatosis in daily cannabis users. These results, which need to be confirmed, underscore the importance of taking into account consumption behaviors when treating and following up HIV/HCV co-infected patients. The results of these two studies conducted by Patrizia Carrieri and her colleagues (Inserm Unité 912, SESSTIM, Marseille, and Unité 1219, Bordeaux) will be presented in poster format on 26 July 2017 during the *9th Conference* on *HIV Science (IAS 2017)*, organized by the International AIDS Society and the ANRS in Paris from July 23rd to 26th 2017.

The ANRS CO13-HEPAVIH cohort, which includes 1850 HIV/HCV co-infected patients, was set up in 2005 to analyze the natural history of co-infection and to shed light on the interactions between the two viruses and their treatments. The patients included are followed up every 6 or 12 months, depending on the status of their liver disease and their treatments. The ANRS CO13-HEPAVIH cohort has generated a rich dataset on HIV/HCV co-infection and its therapeutic management in the era of direct-acting antivirals (DAAs).

One of the longitudinal analyses of these data, coordinated by Patrizia Carrieri, epidemiologist at Inserm Unit 912 SESSTIM (Marseille), related to interactions between coffee intake and alcohol consumption and their impact on liver fibrosis in HIV/HCV co-infected patients. Previous studies in this population showed improvement in markers of liver function in heavy coffee drinkers (at least three cups a day). It is known that alcohol consumption, even minimal, has a deleterious effect on liver fibrosis in co-infected patients. The ANRS HEPAVIH team studied interactions between coffee intake and alcohol consumption and how they related to the degree of fibrosis, in 1,019 patients of the cohort. They found a 57 % reduction in the risk of advanced fibrosis in patients who drink at least three cups of coffee a day. This lower risk of fibrosis in heavy coffee drinkers is observed independently of the level of alcohol consumption, and after adjustment for other individual characteristics (age, body mass index, HIV and HCV treatment status, CD4 T-cell count). In other words, even in patients with high alcohol consumption, which increases the risk of liver fibrosis, consuming at least three cups of coffee a day could attenuate the negative impact of alcohol on the liver.

Recent studies suggest that cannabis reduces the risk of diabetes, and the ANRS HEPAVIH team studied the impact of cannabis use on the risk of hepatic steatosis (abnormal presence of fat in the liver). Among the 838 patients included in this study, 14 % reported using cannabis every day. Cross-sectional analysis of data (on steatosis

measured at one follow-up point) showed that daily cannabis use is associated with a 40 % reduction in the risk of steatosis, which was not found with less frequent use of cannabis.

Patrizia Carrieri considers that "*further studies are needed on the interactions between eating behaviors, consumption of psychoactive substances, and liver disease progression, particularly interventional studies. The ANRS HEPAVIH cohort data obviously cannot be used to recommend the consumption of any substance or product to HIV/HCV co-infected patients. However, it would certainly be useful for clinicians to take into account their patients' consumption behaviors when making a clinical evaluation.*"

Coffee intake modifies the relationship between alcohol consumption and liver fibrosis in patients coinfected with HIV and hepatitis C virus (ANRS CO13-HEPAVIH cohort).

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Daily cannabis use and reduced risk of severe steatosis in a population of patients co-infected with HIV and hepatitis C virus (HCV) (ANRS CO13-HEPAVIH).

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