Hepatitis C infection and the risk of non-liver-related morbidity and mortality in HIV-positive persons in the Swiss HIV Cohort Study

Helen Kovari, Andri Rauch, Roger Kouyos, Mathieu Rougemont, Matthias Cavassini, Patrick Schmid, Marcel Stöckle, Enos Bernasconi, Rainer Weber, Bruno Ledergerber &

BACKGROUND
HCV infection has been associated with increased non-liver-related morbidity and mortality. However, studies have yielded inconsistent results.

METHODS
The incidence of clinical events in HIV-infected HCV-seropositive and incidence-density-matched HCV-seronegative participants of the Swiss HIV Cohort Study from 08/1994 to 12/2014 was studied. We compared firstly, HCV-seropositive with HCV-seronegative participants, and secondly, HCV-viremic with successfully treated nonviremic patients. Poisson regression was used to assess differences between these groups.

RESULTS
We included 2503 HCV-seropositive participants, 540 with spontaneous HCV-clearance, 1294 untreated HCV-RNA-positive, 345 treated with SVR, 281 treated without SVR, and 2503 HCV-seronegative controls. After a mean follow-up of 8.2 years, we observed 107/18 (HCV-seropositive/HCV-seronegative) liver events, 41/14 kidney events, 230/121 osteoporosis/fractures, 82/94 diabetes mellitus, 114/129 cardiovascular events, 119/147 non-AIDS malignancies, 162/126 HIVCDC B/C events, 106/10 liver-related deaths, and 227/218 non-liver-related deaths. Compared to HCV-negative controls, HCV-seropositive participants had an increased risk of liver events (IRR 6.29[95% CI 3.52-11.22]), liver-related death (8.24[3.61-18.83]), kidney events (2.43[1.11-5.33]), and osteoporosis/fracture (1.43[1.03-2.01]). Among HCV-seropositive individuals, treated participants without SVR versus those with SVR had a higher risk of liver events (6.79[2.33-19.81]), liver-related death (3.29[1.35-8.05]), and diabetes mellitus (4.62[1.53-13.96]). Similar but not statistically significant differences were found between untreated HCV-RNA positive patients and those with SVR.

CONCLUSIONS
While HCV-exposure was associated with an increased risk of kidney disease and osteoporosis/fracture, this risk did not seem to be dependent of persistent
HCV-RNA. Successful HCV treatment was associated with a lower incidence of liver disease, liver-related death and diabetes mellitus while the other conditions studied were less affected.

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