Is there Long-term Evidence of Advanced Liver Fibrosis after Acute Hepatitis C in HIV Coinfection?

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Abstract

Background: After ten years, the epidemic of sexually transmitted acute hepatitis C (AHC) infection among HIV-seropositive MSM is still ongoing. The rate of early liver fibrosis progression after AHC is of particular interest as more advanced fibrosis progression has been described in small retrospective case series. Here we evaluate the long-term evolution of liver fibrosis in HIV-patients with persistent viremia after AHC.

Methodology: 41 HIV-infected patients from 3 European countries with diagnosed acute HCV infection since 2003 with at least 12 months of follow-up and persistent HCV viremia (chronic course or unsuccessful treatment) were repeatedly evaluated for liver fibrosis by means of transient elastography. Fisher's exact, chi-square and Mann-Whitney U test were used for statistical analysis.

Results: All patients were male, median age was 43 years. Main routes of transmission were MSM (97.6%) and IVDU (2.4%). In 80% of patients clinical symptoms of an acute hepatic infection were missing. 78% of patients were infected with HCV GT 1 and 22% with GT 4. Median baseline HCV RNA was 1.989.500IU/ml and median CD4 T cell count 491 cells/ul. 95% of all patients received cART, 85% had baseline HIV RNA <50cop/ml. Median ALT was 401 U/l. Median follow-up time was 179 weeks (IQR 120-276). All patients had persistent HCV viremia, 11 (26.8%) due to a chronic course and 30 (73.2%) after unsuccessful early treatment.
Overall, as shown in table 1 there was no significant change in median liver stiffness over a maximum follow-up of 8 years. There was no significant correlation between liver stiffness and reason for HCV persistence (chronic course vs. unsuccessful treatment), follow-up time, BMI, alcohol or drug abuse, diabetes, lipodystrophy, cART duration, or exposure to d-drugs.

Conclusions: An episode of acute hepatitis C in HIV-positive MSM does not appear to lead towards early advanced liver fibrosis. This finding is particularly reassuring for clinicians and patients in whom HCV persists due to a chronic course or unsuccessful early treatment.

Background

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Methods

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Results

All patients were male, median age was 43 years. Main routes of transmission were MSM (97.6%) and IVDU (2.4%). In 80% of patients clinical symptoms of an acute hepatic infection were missing. 78% of patients were infected with HCV GT 1 and 22% with GT 4. Median baseline HCV RNA was 1.989.500IU/ml and median CD4 T cell count 491 cells/ul. 95% of all patients received cART, 85% had baseline HIV RNA <50copies/ml. Median ALT was 401 U/l. Median follow-up time was 179 weeks (IQR 120-276) (see table 1). All patients had persistent HCV viremia, 11 (26.8%) due to a chronic course and 30 (73.2%) after unsuccessful early treatment (see figure 1).

	Median age [years] (IQR)	Transmission risk [%]		Median CD4-cells [/µl] (IQR)	HIV-RNA <50copies /ml [%]	cART [%]	Median HCV-RNA [IU/ml] (IQR)	HCV-RNA >800.000 IU/ml [%]	HCV-Genotype [%]		Median maximum ALT [U/l] (IQR)	Clinical symptoms* [%]	Median Fibrosis Score [kPa] (IQR)	Median Follow-up [weeks] (IQR)
		MSM	IVDU						1	4				
All (n=41)	43 (37-47)	97.6	2.4	491 (360-736)	85	95	1.989.500 (633.000-6.670.000)	72.5	78	22	401 (153-616)	20	8 (5.9-10.2)	179 (120-276)

Table 1: Baseline characteristics

* Fatigue, abdominal pain, jaundice

Overall, as shown in table 2 there was no significant change in median liver stiffness over a maximum follow-up of 8 years.

Years since AHC diagnosis (# of available measurements)	1 (n=20)	2 (n=23)	3 (n=17)	4 (n=14)	5 (n=10)	6 (n=3)	7 (n=4)	8 (n=3)
Median liver stiffness [kPa] (IQR)	7.7 (6-10)	7.0 (6-10)	6.3 (5-8)	6.4 (5-8)	4.4 (4-5)	7.7 (6-20)	7 (5.1-10)	8 (5-49.6)

Table 2: Changes in median liver stiffness per year of follow-up

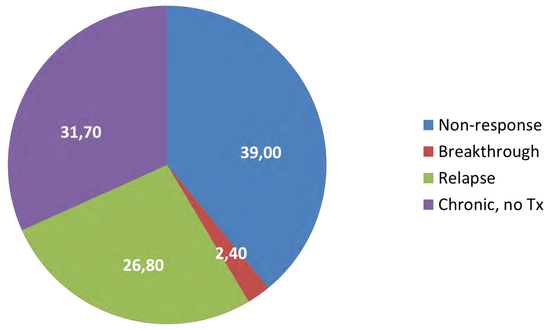


Figure 1. Reasons for chronicity after acute HCV infection (%, n=41)

There was no significant correlation between liver stiffness at last follow-up and reason for HCV persistence (chronic course vs. unsuccessful treatment), follow-up time, BMI, alcohol or drug abuse, diabetes, lipodystrophy, cART duration, or exposure to d-drugs.

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Conclusions

An episode of acute hepatitis C in HIV-positive MSM does not appear to lead towards early advanced liver fibrosis. This finding is particularly reassuring for clinicians and patients in whom HCV persists due to a chronic course or unsuccessful early treatment.