

## Impact of HCV infection in a HIV cohort followed over 18 years: past and present

A. Mena<sup>1</sup>, I. Rodríguez Osorio<sup>1</sup>, H. Meijide<sup>1</sup>, Á. Castro Iglesias<sup>1</sup>, S. López Calvo<sup>1</sup>, P. Vázquez Rodríguez<sup>1</sup>, B. Pernas<sup>1</sup>, M. Grandal<sup>1</sup>, J. Domingo Pedreira<sup>1</sup>, E. Poveda<sup>1</sup>.

<sup>1</sup> Division of Clinical Virology, INIBIC-CHUAC, A Coruña, Spain

**Background and Aims:** This study evaluates the impact of HCV infection in a cohort of HIV infected patients followed over 16 years and trends in hospitalizations and mortality.

**Methods:** A cohort of HIV-infected patients was followed at our institution between 1996–2013. Epidemiological, clinical and main data related with hospitalizations and mortality was recorded. Data has been analyzed considering HIV-mono and HIV/HCV populations and two periods of nine years each.

**Results:** A total of 2257 HIV infected patients (857 HIV/HCV co-infected) were retrospectively examined over 16 years. Overall, 76% were men, median age of 31 (25–37) years and 57% have an AIDS event during the follow-up. Patients under antiretroviral therapy (ART) was similar in HIV/HCV and HIV-mono in both periods (>87%). Main results are depicted in the table

Variable	1996–2004			2005–2013		
	HIV	HIV/HCV	p	HIV	HIV/HCV	p
N patients (%)	905 (55)	730 (45)		997 (59)	694 (41)	
Follow-up (years)	6.8±4.7	9.4±4.8	0.001	11.6±4.3	16.4±4.8	0.001
Mortality (%)	311 (34)	275 (37)	0.085	178 (18)	189 (27)	<0.001
Infectious (%)	172 (55)	102 (37)	0.040	60 (34)	41 (22)	0.035
Tumoral (%)	62 (20)	27 (10)	0.020	56 (31)	34 (18)	0.020
Cardiovascular (%)	17 (5)	8 (3)	0.045	23 (13)	18 (9)	0.080
Liver-related mortality (%)	7 (2)	74 (27)	<0.001	1 (1)	72 (38)	<0.001
Hospitalizations	1899	1398	0.110	1297	1458	0.050
Infectious (%)	845 (44)	544 (39)	0.060	454 (35)	517 (35)	0.220
Liver-related (%)	59 (3)	119 (8)	0.001	46 (3)	183 (13)	<0.001

Overall, HIV/HCV co-infected population have significant lower CD4 counts (cell/mm<sup>3</sup>) in both periods (505 vs 312 and 542 vs 322;  $p < 0.001$ , respectively). A lower rate of patients achieved HIV-RNA < 50 cop/mL in the second period compared with HIV-mono (59.2 vs 56.4 and 75.3 vs 67.2;  $p = 0.03$ , respectively). In this population, a low rate of patients received HCV treatment although was higher in the second period (6.9% vs 11.5%,  $p = 0.01$ ). Consequently, a higher proportion of patients achieved sustained virological response (SVR) in the second period (61% vs 70%,  $p = 0.03$ ). The rate of liver-related mortality was significantly higher in HIV/HCV compared with HIV-monoinfected with an increase in the second period ( $p = 0.02$ ). Moreover, hospitalizations related with liver-disease were higher in HIV/HCV and were higher in the second period ( $p = 0.04$ ). Among patients achieving SVR, only 3.2% and 3.6% in both periods, respectively, had a liver-related hospitalization and none died.

**Conclusions:** HCV infection has a negative impact on HIV outcome related with lower CD4 recovery and lower rates of virological success in HIV/HCV patients under ART. However, HCV infection does not impact on the mortality related with infectious, tumoral or cardiovascular diseases and only increase the rate of liver-related mortality in HIV/HCV patients compared with HIV-monoinfected. Moreover, HCV infection significantly increased liver-related hospitalizations and mortality on the long-term. Considering the low rate of patients receiving HCV treatment in this cohort, these data confirm the harmful contribution of uncontrolled HCV infection in HIV/HCV infected population.