Sharp Decline in the Seroprevalence of Hepatitis C Virus among HIV-infectedPatients in Spain

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Abstract

Background: The HIV epidemic is experiencing some changes in Spain, mainly due to a decrease in the transmission of the infection by injection drug use (IDU). We hypothesized that this change may have important repercussions in the epidemiology of HIV/HCV coinfection in our country.

Methods: We collected data from 51,70 HIV-positive ART-naïve patients of two different cohorts, who initiated care in Spanish institutions: (i) a retrospectively assembled cohort, from Jan 1997 to Dec 2003 (CoRIS-MD); and (ii) a prospective cohort, from Jan 2004 to Nov 2006 (CoRIS). Variables related to sociodemographic characteristics, HIV and HCV infections were collected. Univariate analysis and logistic regression were performed in Stata 10® Software.

Results: The prevalence of HCV steadily decreased from 70.8% (IC95: 73.7-68.0) in patients who entered the study in 1997, to 16.3% (IC95: 13.5-19.0) in patients who entered in 2006. During the same period, the proportion of IDU decreased from 67.1% (IC95: 64.1-70.0) to 14.5% (IC95: 11.8-17.1). HCV infection was strongly associated with IDU (OR 36.4; IC95: 27.7-47.9, p=0.0000) taking patients who acquired HIV by heterosexual transmission as the reference category.

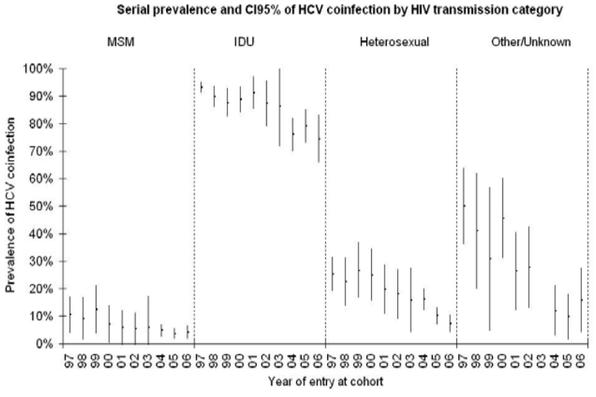
Conclusions: Seroprevalence of hepatitis C coinfection in HIV+ ART-naïve patients initiating care in Spain has decreased from 1997 to 2006. This decrease is driven by a change in HIV transmission patterns. .

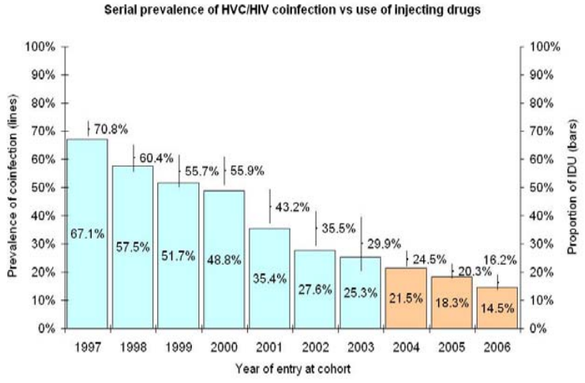
Objective

The aim of this study is to describe changes in the prevalence of HCV coinfection in HIV HAART-naïve patients who initiated care in Spanish institutions during a 10-year period (1997 to 2006) and to assess whether the association between transmission categories and HCV coinfection has been modified along this period.

Results

BASELINE CARACTERISTICS	CoRIS-MD (n=2,611)		CoRIS (n=2,559)		Total (n=5,170)	
	n	Freq.	n	Freq.	n	Freq.
Gender						
Female	721	27.61%	598	23.37%	1,319	25.51%
HCV status						
Infected	1,522	58.29%	532	20.79%	2,054	39.73%
Transmission pathway						
MSM	378	14.48%	979	38.26%	1,357	26.25%
IVDU	1,394	53.39%	473	18.48%	1,867	36.11%
Heterosexual	624	23.90%	968	37.83%	1,592	30.79%
Other	215	8.23%	139	5.43%	354	6.85%
Age (categorical)						
Less than 30	591	22.64%	608	23.76%	1,199	23.19%
30 to 39.9	1,580	60.51%	1,151	44.98%	2,731	52.82%
40 or more	440	16.85%	800	31.26%	1,240	23.99%
MSM: male who have sex with male; IVDU: intravenous drug user.						





Association to coinfection	OR (IC95)	n	pH*	pT*
Gender				
Male	1	3,851	0.8977	
Female	1.01 (0.89-1.15)	1,319		
Transmission pathway				
Heterosexual	1	1,592	0.0000	
MSM	0.30 (0.23-0.39)	1,357		
IVDU	36.41 (27.69-47.86)	1,867		
Other/unknown	1.96 (1.49-2.57)	354		
Age				
Less than 30	1	1,199	0.0000	0.0000
30 to 39.9	1.98 (1.71-2.28)	2,731		
40 or more	0.84 (0.71-1.00)	1,101		
* Chi-square p values for homogeneity (pH) and trend (pT)				

Methods

We collected data from 5,170 HIV-positive HAART-naïve patients with at least 1 HCV test who initiated care in Spanish institutions included in two different cohorts:

- CoRIS-MD retrospectively integrated data of 10 hospitals from 7 of the 17 Autonomous Communities in Spain. Inclusion criteria were: patients over 18 years of age, with at least 6 months of follow-up. Thus, patients were incorporated at any time, from January 1st 1997 to June 30th 2003. The total number of CoRIS-MD subjects included in the study was 2,611 HIV-positive HAART-naïve patients.
- CoRIS integrated data of 20 hospitals from 9 of the 17 Autonomous Communities in Spain. Inclusion criteria were: patients over 13 years of age, with at least 6 months of follow-up. Thus, patients were incorporated at any time, from January 1st 2004 to May 31st 2006. The total number of CoRIS subjects included in the study was 2,559 HIV-positive HAART-naïve patients.

Variables studied

Age, sex, data of entry at each cohort, risk behaviour pattern, and HCV serological status at entry.

Statistical analysis

Descriptive analysis of baseline characteristics were performed using frequency distributions. We calculated the HCV prevalence for each cohort-year to construct the serial HCV/HIV co-infection prevalence for the study period. A description of the evolution of HCV serial prevalence in HIV HAART-naïve patients by transmission category and year of entry at each cohort was also performed.

Conclusions

In summary, the change in HIV transmission practices from IVDU to u n protected sex has resulted in a significant decrease in the serial prevalence of HCV among the overall HIV-infected population. This observation is important from an epidemiologic point of view, but also from a clinical perspective. At present, end-stage liver disease secondary to HCV coinfection is a leading cause of death among HIV infected patients.

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