INCIDENCE OF HEPATITIS C VIRUS (HCV) IN A MULTICENTER COHORT OF HIV-POSITIVE PATIENTS IN SPAIN 2004–2011: INCREASING RATES OF HCV DIAGNOSIS BUT NOT OF HCV SEROCONVERSION

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Objectives

We aim to describe rates and risk factors of Hepatitis C Virus (HCV) diagnoses, follow-up HCV testing and HCV seroconversion from 2004 - 2011 in a cohort of HIV-positive persons in Spain.

Methods

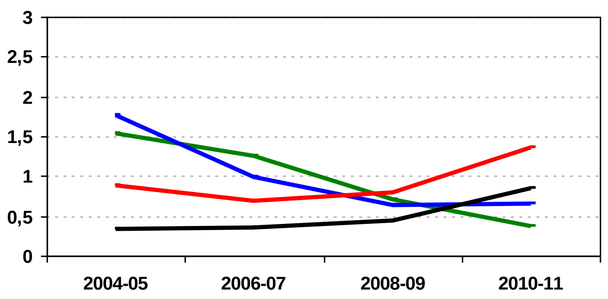
- CoRIS is a multicentre, open and prospective cohort recruiting adult HIV-positive patients naïve to antiretroviral therapy in 13 of the 17 regions of Spain from 2004 onwards.
- We analysed patients with at least one negative and one follow-up HCV serology.
- The date of HCV diagnosis was the date the first HCV test was positive. The date of HCV seroconversion was estimated using two different methods: a) the midpoint between the last negative and the first positive HCV test for any time window, b) a multiple imputation technique, assuming that seroconversion was equally probable at any given moment during that time window.
- Patients were considered at risk from the date of cohort entry to the date of their last HCV negative serology or the date of HCV diagnosis/seroconversion.
- Incidence rates (IR) were calculated and a multivariate poisson regression was used to estimate adjusted Relative Rates (aIRR).

Results

Of 2112 subjects, 53 HCV seroconversions were observed, IR of 0.93/100py (CI95%: 0.7-1.2).

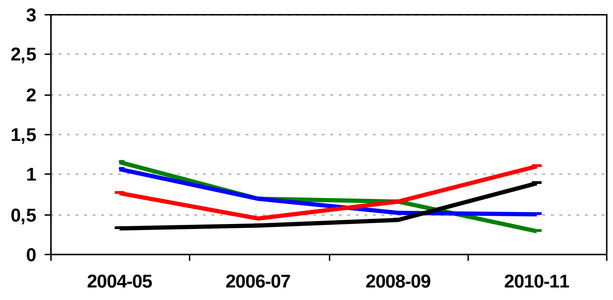
Time trends of rates of HCV diagnoses, HCV infections and of follow-up HCV tests, 2004-2011.

All Subjects



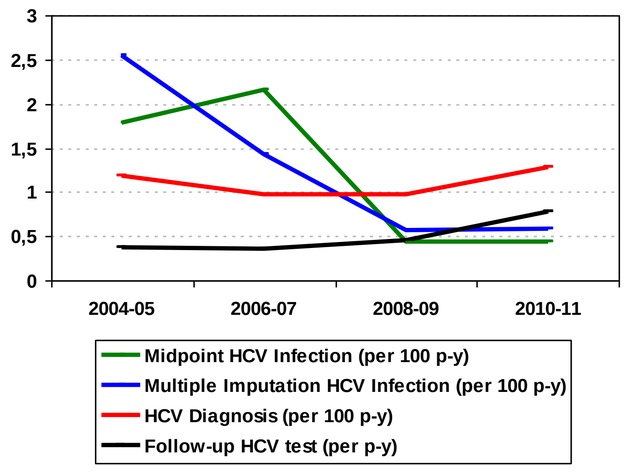
	aIRR 2010-11 vs 2004-05 (CI 95%)
MIDPOINT	0.24 (0.10-0.58)
MULTIPLE IMPUTATION	0.37 (0.12-1.11)
DIAGNOSIS	1.55 (0.37-6.55)
FOLLOW-UP	2.52 (2.13-2.98)

Men who have sex with men



	aIRR 2010-11 vs 2004-05 (CI 95%)
MIDPOINT	0.24 (0.06-0.90)
MULTIPLE IMPUTATION	0.46 (0.09-2.31)
DIAGNOSIS	1.45 (0.31-6.82)
FOLLOW-UP	2.81 (2.25-3.52)

Heterosexually acquired cases



	aIRR 2010-11 vs 2004-05 (CI 95%)
MIDPOINT	0.24 (0.10-0.58)
MULTIPLE IMPUTATION	0.23 (0.06-0.98)
DIAGNOSIS	1.08 (0.11-10.24)
FOLLOW-UP	2.04 (1.57-2.67)

Rates and associated risk factors of HCV infection

	CoRIS				
	# Sero-converters	Person-years	IR	IRR (CI 95%)	aIRR (CI 95%)
SEX					
Male	33	4,694.28	0.70	1	1
Female	13	941.43	1.38	1.96 (1.03-3.76)	1.58 (0.78-3.20)
TRANSMISSION CATEGORY					
Heterosexuals	19	1,846.42	1.03	1	1
Injecting drug users	5	53.31	9.38	9.11 (2.86-29.08)	9.63 (2.88-32.19)
Homo/bisexual men	21	3,592.28	0.58	0.57 (0.24-1.36)	0.81 (0.29-2.27)
Other /Unknown/ Not available	1	143.70	0.70	0.68 (0.10-4.79)	0.77 (0.11-5.50)
AGE AT ENTRY					
< =30 years	11	1,866.73	0.59	1	1
31-40 years	19	2,350.63	0.81	1.37 (0.57-3.30)	1.38 (0.57-3.30)
41-50 years	12	960.44	1.25	2.12 (1.15-3.90)	1.66 (0.85-3.24)
> 50 years	4	457.91	0.87	1.48 (0.68-3.24)	1.29 (0.53-3.14)
CD4+ T-Cell Count					
<200 cells/mm^3	8	455.76	1.76	2.36 (1.17-4.75)	1.93 (0.90-4.15)
>= 200 cells/mm^3	38	5,100.96	0.74	1	1
Not available	0	79.00	0.00		
TOTAL	46	5,635.72	0.82		

	CoRIS - HOMOSEXUAL/BISEXUAL MEN (MSM)				
	# Sero-converters	Person-years	IR	IRR (CI 95%)	aIRR (CI 95%)
AGE AT ENTRY					
<=30 years	5	1,314.77	0.38	1	1
31-40 years	9	1,562.66	0.58	1.51 (0.44-5.22)	1.51 (0.44-5.22)
41-50 years	6	490.79	1.22	3.21 (1.66-6.23)	3.21 (1.66-6.23)
> 50 years	1	224.06	0.45	1.17 (0.24-5.67)	1.17 (0.24-5.67)
TOTAL	21	3,592.28	0.58		

	CoRIS – HETEROSEXUALS (HTX)				
	# Sero-converters	Person-years	IR	IRR (CI 95%)	aIRR (CI 95%)
SEX					
Male	6	943.48	0.64	1	1
Female	13	902.95	1.44	2.26 (1.01-5.05)	2.35 (1.03-5.34)
CD4+ T-Cell Count					
<200 cells/mm^3	5	247.88	2.02	2.26 (0.78-6.53)	2.39 (0.83-6.89)
>= 200 cells/mm^3	14	1,569.37	0.89	1	1
Not available	0	29.17	0.00	---	---
TOTAL	19	1,846.42	1.03		

Risk of HCV seroconversion was higher for for injecting drug users (IDU) compared to HTX.

For MSM, subjects aged 40-50 compared to 30 or less .

Among HTX, female sex and having <200 CD4-count .

Conclusions

- We report increases in HCV diagnoses rates which seem secondary to intensification of HCV follow-up testing but not to rises in HCV infection rates.
- Risk of HCV seroconversion was higher for injecting drug users compared to heterosexuals.
- In men who have sex with men, HCV IR increases with age.
- Among heterosexuals, HCV IR is higher in women and in subjects impaired immunological situation.

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