

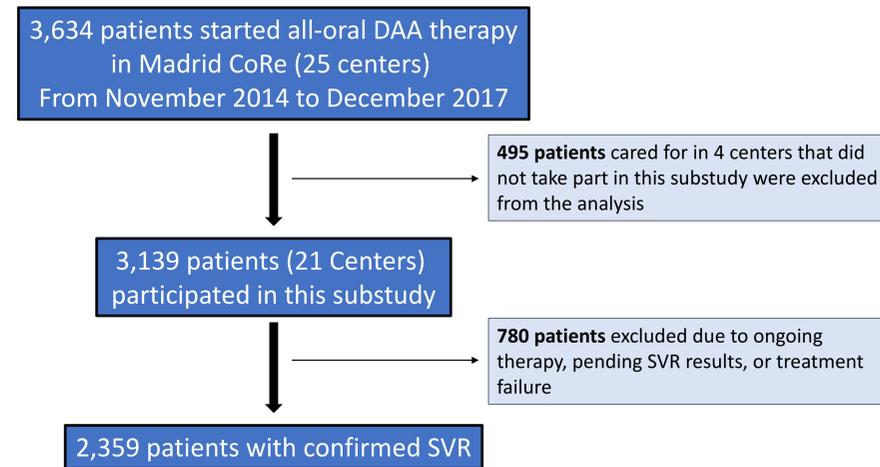
Background & Aims

- High rates of HCV reinfection following SVR have been observed among IDU and MSM who engage in high-risk sexual practices with concomitant drug use¹⁻².
- Most of the information about HCV reinfection following SVR comes from the era of interferon-based anti-HCV therapy. Little is known about HCV reinfection in patients treated with all-oral DAA therapy.
- We analyzed HCV reinfection among participants in a large real-world registry of HIV/HCV-coinfected patients treated with all-oral DAA therapy.

Abbreviations: SVR, sustained viral response; IDU, injection drug users; MSM, men who have sex with men; DAA, direct-acting antivirals against HCV.

1. Cunningham EB, et al. Nature reviews 2015; 12(4): 218-30. 2. Ingiliz P, et al. J Hepatol 2017; 66(2): 282-7.

Flow chart



Methods

Design	Madrid-CoRe is a prospective registry of HIV/HCV-coinfected patients treated with all-oral DAA therapy in the region of Madrid from November 2017 onwards.*
Definitions	SVR was defined as negative HCV-RNA 12 weeks after completion of treatment. Reinfection was defined as a positive HCV-RNA test after achievement of SVR
Study period	The study period started on the date SVR was confirmed. The censoring date was December 31, 2017
Screening	HCV-RNA testing was performed in the case of newly developed ALT elevation. It was also performed routinely 12 weeks after SVR12 and then every 6-12 months depending on local procedures.
Statistics	Incidence-rates and confidence intervals were calculated using Stata, version 14.0 (StataCorp, College Station, TX).

* For a full description of Madrid-CoRe see: Berenguer J, et al. Hepatology. 2018;68(1):32-47

Results

Reinfections	Reinfections were detected in 17 patients (12 MSM, 5 IDU) (Tables 1 & 2)
Timing	Reinfections were detected a median of 15 wks. (IQR 13 -26) after SVR
Genotypes	In 10 patients, reinfection was caused by a different HCV genotype
Behavioral information	<ul style="list-style-type: none"> MSM: all 12 MSM with reinfection acknowledged unprotected anal intercourse with several partners, 7 used chemsex, and 4 practiced slamming. A concomitant STI was detected in 5 patients. IDU: 4 out of 5 IDUs with reinfection reported injecting drugs after SVR
Treatment of reinfection	<ul style="list-style-type: none"> After reinfection, 15 patients were treated for HCV. At the time of this report, 7 achieved SVR, 4 completed therapy and had pending results, and 4 had ongoing treatment. One patient (IDU) died from complications of drug use, and one patient (MSM) was lost to follow-up.

Table 1. Reinfections after SVR

HIV transmission category	N	Reinfections	Years of follow-up	Rate*	95% CI
All categories	2,359	17	3,546	0.48	0.30-0.77
MSM	177	12	202	5.93	3.37-10.44
IDU	1,459	5	2,329	0.21	0.09-0.52
Other/unknown	723	0	1,015	-	-

* Per 100 person-years of follow-up

Table 2. Characteristics of patients with reinfection

#	Age	Sex	Risk Factor	Prior HCV RX	Genotype	Cirrhosis	Initial DAA regimen	Wks. to reinfection	Reinfection Genotype	Self-reported risk factors for reinfection	Treatment of reinfection	Outcome
1	40	M	MSM	No	1a	No	3D	14	1a	uAIC, chemsex, slamming	SOF/LDV	SVR
2	40	M	MSM	PR	1a	No	SOF/LDV	18	4	uAIC, chemsex, STI	GZR/EBV	SVR
3	46	M	MSM	No	4	No	2D	15	1a	uAIC, chemsex, STI	GLE/PIB	SVR
4	49	M	MSM	PR	1a	No	3D	12	1a	uAIC	SOF/VEL/VOX	Ongoing
5	29	M	MSM	PR	1a	No	SOF/LDV	19	1a	uAIC, chemsex, slamming	NO	LFU
6	36	M	MSM	PR	4	No	2D	26	1a	uAIC, chemsex	3D	SVR
7	45	M	MSM	No	1a	No	SOF/LDV	15	1a	uAIC, chemsex, slamming	GZR/EBV	Ongoing
8	40	M	MSM	No	4	No	SOF/LDV	21	1a	uAIC, STI	SOF/LDV	Pending
9	40	M	MSM	No	1a	No	SOF/LDV	8	4	uAIC, chemsex, slamming	SOF/LDV	Pending
10	42	M	MSM	No	1a	Yes	SOF/LDV	27	1a	uAIC	GLE/PIB	SVR
11	50	M	MSM	No	1b	No	SOF/LDV	14	1a	uAIC, STI	SOF/LDV	Pending
12	43	M	MSM	No	4	No	SOF/LDV	55	4	uAIC, chemsex, STI	SOF/LDV	SVR
13	34	F	IDU	No	1b	No	3D	13	1a	IDU	GZR/EBV	Ongoing
14	55	M	IDU	No	1a	No	SOF/LDV	10	3	IDU	SOF/VEL	Ongoing
15	46	M	IDU	No	4	Yes	SOF/LDV	60	1b	IDU	SOF/LDV	SVR
16	46	M	IDU	No	1b	Yes	SOF/LDV	50	1a	IDU	NO	Death
17	56	M	IDU	No	4	No	SOF/LDV	12	4	None reported	SOF/VEL/VOX	Pending

Abbreviations: PR, peg IFN + RBV; uAIC, unprotected anal intercourse; STI, concurrent sexually transmitted infection; LFU, lost to follow-up

Conclusions

- HCV reinfection is a matter of concern in HIV-positive MSM treated with all-oral DAA therapy in the region of Madrid.
- Our data suggest that prevention strategies and frequent testing with HCV-RNA should be applied following SVR in MSM who engage in high-risk practices