

Effectiveness of DAAs In HIV/HCV-coinfected Patients with Decompensated Cirrhosis

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Background and Aim

- Clinical trials and real-life studies show high rates of success after all-oral therapy (Rx) with direct-acting antivirals (DAA) in HCV-monoinfected patients with decompensated cirrhosis.
- In addition, eradication of HCV with all oral DAA has been associated with short-term improvement in clinical and biochemical indicators of liver disease between baseline and post-treatment week 12 including patients with Child-Turcotte-Pugh (CTP) class C cirrhosis.
- In this study, we assessed real-life outcomes of all-oral DAA Rx in HIV/HCV-coinfected patients with decompensated cirrhosis; an area of which little is known.

Madrid-CoRe

Madrid-CoRe (Madrid Coinfection Registry)

- Prospective registry of HIV/HCV-coinfected adults (≥ 18 years) undergoing therapy with DAAs for HCV infection in the region of Madrid
- Compulsory for all hospitals from the Madrid Regional Health Service (SERMAS)

Patients registered in MADRID-CoRe

- 2,402 patients registered between Nov 2014 and May 2016

Eligibility criteria and study design

Key inclusion criteria

- HIV/HCV coinfection
- Treatment with DAAs for HCV
- Decompensated cirrhosis defined as current/prior CTP B/C or liver decompensation or hepatocellular carcinoma (HCC).
- Scheduled to finish treatment on May 31, 2016

Primary endpoint

- Wk. 12 sustained viral response (SVR₁₂) by ITT analysis

Secondary endpoints

- Viral relapse and viral breakthrough
- Rx discontinuation (D/C) due to adverse events (AEs) or other reasons

Flow chart

2,662 HIV/HCV-coinfected patients initiated DAA-based Rx in Madrid-CoRe from Nov 2014 to May 2016

709 patients were on treatment on May 31, 2016

1,953 patients scheduled to finish treatment on May 31, 2016

1066 patients without cirrhosis
736 patients with compensated cirrhosis
5 unknown liver fibrosis stage

146 patients with decompensated cirrhosis included in this analysis

Patient characteristics

Variable	N = 146
Age years – median (IQR)	51 (48 – 54)
Male – n (%)	102 (69.9)
Prior IDU – n (%)*	85/97 (87.6)
CDC category C – n (%)*	33/97 (34.0)
CD4+ T cells/ μ L – median (IQR)*	474 (247 – 687)
cART – n (%)	125 (85.6)
Child-Turcotte score – n (%)	
CPT A	75 (51.4)
CPT B	62 (42.5)
CPT C	9 (6.2)
MELD score – median (IQR)	10 (8 – 12)
History of hepatocellular carcinoma – n (%)	15 (10.3)
Liver transplantation – n (%)	1 (0.7)
Liver transplantation waiting list – n (%)	7 (4.8)
Anti-HCV – naïve – n (%)	88 (60.3)

*Based on 97 patients with available data

Genotypes and HCV-RNA

Total=146

* Non-subtyped G1, G2, mixed, undetermined

Log₁₀ HCV-RNA Median = 5.98 IQR = 5.47 – 6.43

DAA-based regimens

Regimen	No.
SMV+DCV	N = 1
PrOD	N = 3
SOF+RBV	N = 7
SOF+SMV	N = 26
SOF+DCV	N = 36
SOF/LDV	N = 73

Ribavirin No. (%)

Ribavirin	No. (%)
Yes	69 (47.3)
No	77 (52.7)

Number of Patients

Treatment outcomes by severity of liver-disease

Patients w & w/o cirrhosis in Madrid-CoRe scheduled to finish treatment on May 31, 2016

No-C: 1066 (91.9–94.9%)
Co-C: 736 (88.9–93.1%)
De-C: 146 (73.5–86.9%)

No. SVR ITT
SVR (95% CI)
Relapse
Breakthrough
DC due to AE
DC other
Death

SVR₁₂%

No-C = No cirrhosis
Co-C = Compensated cirrhosis
De-C = Decompensated cirrhosis

SVR₁₂ by DAA regimens and by HCV genotype

Regimen	G1a	G1b	G3	G4	Other	All						
No.	SVR	No.	SVR	No.	SVR	No.	SVR					
SOF/LDV	25	19 (76.0)	16	15 (93.7)	9	7 (77.8)	18	14 (100.0)	5	5 (100.0)	73	60 (82.2)
SOF+DCV	9	9 (100.0)	6	4 (66.7)	10	8 (80.0)	7	7 (100)	4	3 (75.0)	36	31 (86.1)
SOF+SMV	10	6 (60.0)	9	8 (88.9)	0	-	5	3 (60.0)	2	2 (100.0)	26	19 (73.1)
SOF+RBV	1	1 (100.0)	1	1 (100.0)	3	2 (66.7)	0	-	2	1 (50.0)	7	5 (71.4)
PrOD	3	3 (100.0)	0	-	0	-	0	-	0	-	3	3 (100)
SMV+DCV	1	0 (0)	0	-	0	-	0	-	0	-	1	0 (0)
All	49	38 (77.5)	32	28 (87.5)	22	17 (77.3)	30	24 (80.0)	13	11 (84.6)	146	118 (80.8)

Treatment outcomes by subgroups

SVR₁₂%

Subgroups: G1a, G1b, G3, G4, Other, CPR A, CPR B, CPR C, MELD<10, MELD≥10, Native, Pre-treated

Factors associated with treatment failure by logistic regression analysis

Covariate	Odds Ratio	95% CI	P
Sex	1	0.090 – 0.947	0.040
- Male	0.291		
- Female			
Child-Turcotte-Pugh score	1	0.689 – 4.312	0.245
- CTP A	1.723		
- CTP B	9.425	2.011 – 44.167	0.004
- CTP C			

Univariate logistic regression analysis was performed to assess the association of the following baseline variables with treatment failure: age, sex, prior IDU, CDC category, CD4+ cells, concurrent ART, HCV genotype, HCV-RNA, CTP score, MELD score, history of HCC, liver transplantation (LT), LT waiting list, prior anti-HCV therapy, DAA regimen, and RBV use.

The final multivariate logistic regression model included baseline variables with a P value < 0.1 in the univariate analysis (sex and Child-Turcotte-Pugh score).

Conclusions

- The SVR₁₂ rate with all-oral DAAs in coinfected patients with decompensated cirrhosis was 80.8%; significantly lower than in patients without cirrhosis and than in patients with compensated cirrhosis
- Male sex and Child-Turcotte-Pugh stage C were the only variables associated with treatment failure patients with decompensated cirrhosis
- The long-term impact of all-oral DAA therapy in HIV/HCV-coinfected patients with decompensated cirrhosis remains to be determined.

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