Barriers to Hepatitis C Elimination in an Urban Clinic Offering Integrated HIV/HCV Treatment

RUTGERS New Jersey Medical School

Lauren Correia, BS[1]; Christopher Tseng, BS[1]; Mario Portilla, RN[1]; Shobha Swaminathan, MD[1]

[1]Division of Infectious Diseases, Department of Medicine, Rutgers New Jersey Medical School, Newark, NJ 07103

Contact

Shobha Swaminathan, MD
Division of Infectious Diseases
Rutgers New Jersey Medical School
973-972-1057
swaminsh@njms.rutgers.edu

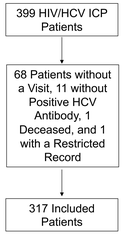
Introduction

- Treatment of Hepatitis C virus (HCV) infection for persons with Human Immunodeficiency Virus (HIV) is dependent on consistent outpatient follow-up.
- Rutgers Infectious Diseases Practice (IDP) offers integrated HIV/HCV treatment that works with patients to address social barriers to care.
- We sought to identify factors that are associated with lower HCV treatment rates in HIV/HCV co-infected patients followed at the IDP.

Methods

- Retrospective chart review for 317 HIV/HCV co-infected patients treated at IDP between January 2017 and July 2018
- Data collected: demographics, HIV disease markers, liver function tests, HCV treatment history and response
- Factors that were significant at the p<0.05 level were included in the multivariate analysis

Figure 1: Patient Population Selection



Results

- Table 1 shows our study group demographics
- Table 2 shows logistic regression of significant HCV treatment factors
- Figure 2 shows behavioral risk factors for HIV/HCV infection
- Figure 3 shows HIV control and liver function

Table 1. Demographics of the Study Group

Variable	Overall (N=317)	Treated (N=206)	Not Treated (N=111)	P-Value
Age, mean years	57.3	57.7	56.6	0.297
Sex (%)				<0.001
Male	184 (58%)	136 (66%)	48 (43%)	
Female	133 (42%)	70 (34%)	63 (57%)	
Race (%)				0.034
Black	251 (79.2%)	163 (79.1%)	88 (79.3%)	
Hispanic	33 (10.4%)	25 (12.1%)	8 (7.2%)	
White	18 (5.7%)	13 (6.3%)	5 (4.5%)	
Other	15 (4.7%)	5 (2.5%)	10 (9.0%)	
HIV Status				
Years Since HIV Diagnosis, mean	13	13	11.2	0.021
HIV Viral Load, mean	7211	1428	17945	<0.001
CD4 Count, mean	567	631	447	<0.001
Health Status				
Number of Medical Problems, mean	10.2	9.9	10.6	0.384
Number of Medications, mean	11.3	11.3	11.4	0.897
Liver Function				
APRI, mean	0.84	0.43	1.6	0.005

Figure 1. Behavioral Risk Factors for HIV/HCV Infection

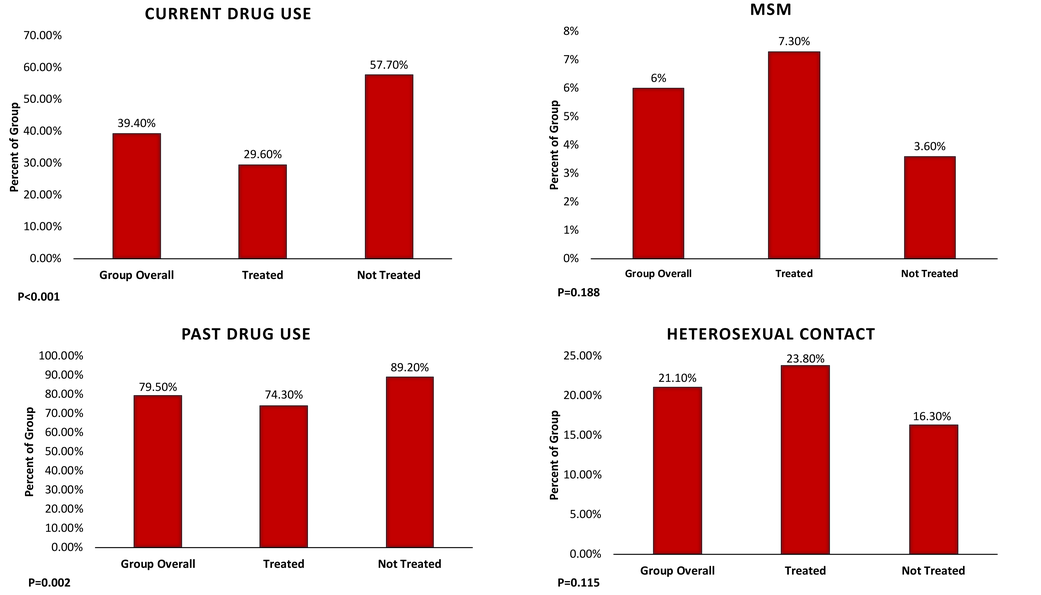


Figure 2. HIV Control and Liver Function

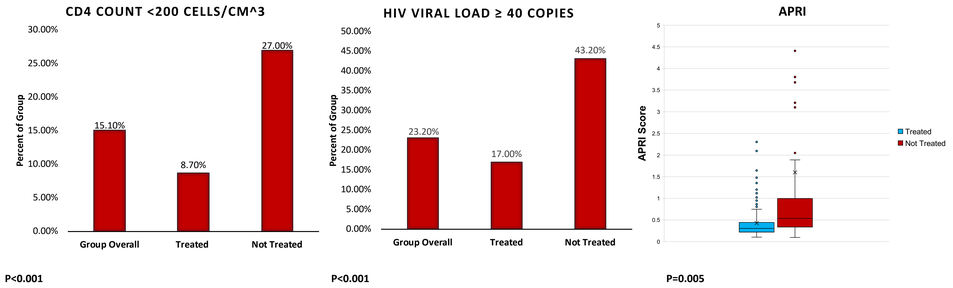


Table 2. Logistic Regression of Significant HCV Treatment Factors

Logistic Regression of Significant HCV Treatment Factors	Odds Ratio	P-Value
Female	2.93	<0.001
APRI	2.39	0.001
Current Drug Use	2.43	0.004
HIV Viral Load ≥ 40 copies	2.11	0.021
Years since HIV Diagnosis	0.957	0.021
CD4 Count < 200 cells/cm^3	1.99	0.097
Past Drug Use	1.55	0.298
Racial Distribution	1.39	0.355

Conclusions

- Our results show that despite the availability of integrated treatment programs, concerted efforts need to be made for patients at high risk for not receiving HCV treatment, and who therefore remain at high risk for complications from HCV.
- Provider perceptions may play a role in withholding treatment for those with high HIV viral load and current drug or alcohol use; whereas the rationale for why women were less likely to be treated is less clear and may be related to trauma and other factors not captured by this project that may negatively impact their access to care.

References

1. Platt, L., et al., *Prevalence and burden of HCV co-infection in people living with HIV: a global systematic review and meta-analysis.* Lancet Infect Dis, 2016. **16**(7): p. 797-808.
2. Pineda, J.A., et al., *Clinical progression of hepatitis C virus–related chronic liver disease in human immunodeficiency virus–infected patients undergoing highly active antiretroviral therapy.* Hepatology, 2007. **46**(3): p. 622-630.
3. Lo Re, V., 3rd, et al., *Hepatic decompensation in antiretroviral-treated patients co-infected with HIV and hepatitis C virus compared with hepatitis C virus-monoinfected patients: a cohort study.* Ann Intern Med, 2014. **160**(6): p. 369-79.
4. Liberto, M.C., et al., *Virological Mechanisms in the Coinfection between HIV and HCV.* Mediators Inflamm, 2015. **2015**: p. 320532.
5. Klein, M., et al., *HIV and hepatitis C virus coinfection in Canada: challenges and opportunities for reducing preventable morbidity and mortality.* HIV Medicine, 2013. **14**(1): p. 10-20.