

Background

Reducing the rate of HCV recurrent viremia (RV) after a sustained virologic response (SVR) is critical in shaping support programs for people who inject drugs (PWID). In a recent meta-analysis, it was shown that high-risk individuals such as PWID who engaged in unsafe injection practices had much higher rates of RV compared to low-risk groups. Rates of RV were as high as 32/1000 person-years of follow-up (PYFU). We sought to demonstrate whether lower rates of RV could be achieved in this population within purpose-built multidisciplinary programs with enhanced post-SVR follow-up.

Methods

An observational, retrospective study was conducted in HCV-infected patients seen at the Vancouver Infectious Diseases Centre (VIDC). Through a comprehensive chart review (with patient consent), data with respect to HCV diagnosis and treatment including baseline characteristics, lifestyle, demographic, and HCV disease-related virologic characteristics was collected. All patients having achieved a cure of HCV infection as a result of therapy and having been seen over the past year at VIDC were included. Correlates of RV were determined, including specific HCV-related risk behaviors, as well as medical and social co-morbidities.

Results

A total of 70 active PWID who achieved SVR were included in this analysis - with a mean age of 53 years, 86% male, 60% genotype 1, 57% HIV co-infected, 22% cirrhotic, 83% treatment-naïve, 63%/70% using heroin/stimulants, and 58% on opiate substitution therapy. With a mean of 5.5 PYFU, the rate of RV was 12.9/1000 PYFU (95% CI, 0.031 - 0.157%), a rate 60% lower than recently reported in the medical literature. Of five cases of RV: the mean age was 52 years, 100% were male, 80% genotype 1a, and 100% HIV co-infected. Furthermore, 100% used amphetamines, 80% used heroin, and 60% were cirrhotic.

Table 1. Baseline Patient Characteristics

	Patients N=70
Median Age	53
Male (%)	70 (86)
HIV Co-infect (%)	40 (57)
Cirrhotic (%)	11 (22)
Treatment Naïve (%)	58 (83)

Table 2. Injection Drug Use

	Patients N=70
Cocaine (%)	49 (70)
Heroin (%)	44 (63)
Other (%)	16 (23)
Opiate Substitution Therapy (%)	41 (59)

Figure 1. Genotype Distribution

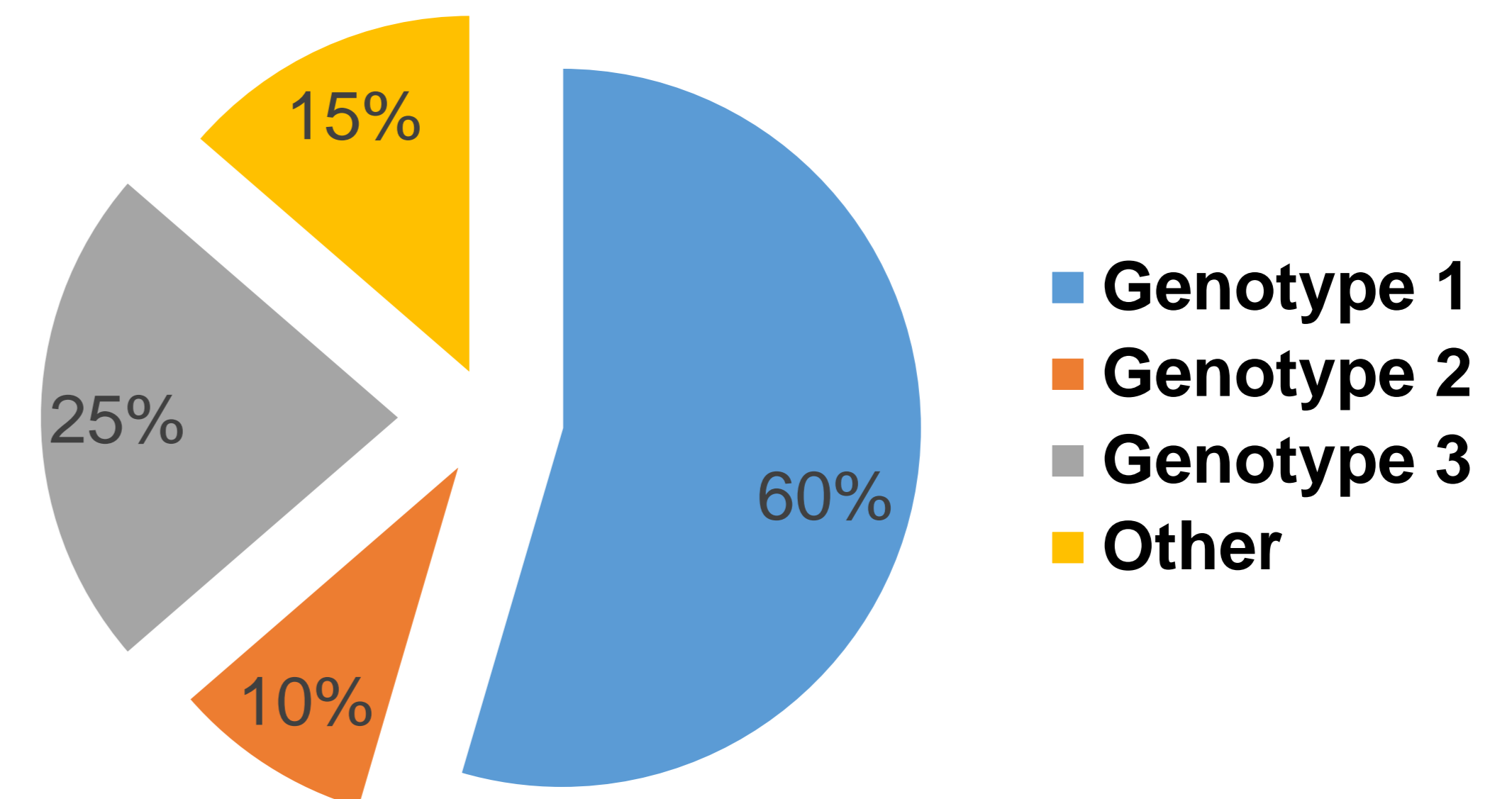


Table 3. Recurrent Viremia (RV)

	Statistics
Total PWID that Achieved SVR	70
Mean PYFU	5.5 years
Incidence of RV	5
Rate of RV	12.9/1000 PFYU
Wilson Confidence Interval	95% CI, 0.031 - 0.157%

Table 4. Attributes of Subjects with Recurrent Viremia

	#1	#2	#3	#4	#5
Age	50	50	61	47	55
Sex	M	M	M	M	M
Genotype	1a	2b/3a	1a	3	1a
Drug Use	Yes	Yes	Yes	Yes	Yes
Urine Drug Screen	A, H	A, C, H	A, B, H	A	A, C, H
Cirrhotic	Yes	Yes	No	Yes	No

Conclusion

Recurrent viremia in mono-, and co-infected PWID can be drastically reduced if care is implemented in a multidisciplinary setting. It is evident that using a multidisciplinary system where psychiatric, addiction-related, and social needs are addressed in an integrated manner along with traditional medical care can lead to a recurrent viremia rate of <1%.

Acknowledgements and Conflicts

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