REVERSAL OF FIBROSIS FOLLOWING SUCCESSFUL HCV THERAPY AMONG HIV/HCV CO-INFECTED PEOPLE WHO INJECT DRUGS (PWID)

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Background

Recent data suggest the possibility of significant reversal of liver fibrosis following successful HCV therapy amongst a wide range of populations. However, this outcome has not been extensively evaluated amongst people who inject drugs (PWID), nor with those who are co-infected with HIV. This study aims to evaluate the ability of the liver to reverse fibrosis after HCV treatment , in the setting of ongoing drug use and co-infection of HIV.

Methods

The Canadian HIV/HCV co-infection cohort is an ongoing national observational study. Subjects are seen every 6 months, at which time demographic, behavioural, and clinical data are collected. This includes ongoing collection of data regarding recreational drug use, HCV disease staging, and HCV treatment status. Within this cohort, we identified individuals who had successfully completed HCV treatment and who were determined to be a person who injects drugs, which we defined as confirmed drug use within 6 months of treatment start. We evaluated these patients' level of liver fibrosis (by FibroScan) before and after HCV treatment, at 24- and 48- weeks after treatment completion. We then analyzed changes in fibrosis stage over time.

Results

A total of 23 eligible subjects were identified, who had baseline (i.e. pre-treatment) and 24-week and/or 48-week post-treatment FibroScan scores. Key demographics of individuals included were: mean age of 53 years (SD=7), 87% were male, 74% Caucasian, 17% Indigenous, 74% genotype 1. All subjects had HIV-RNA of <40 (SD=0) and a mean CD4 count of 578 cells/mm^3 (SD=330). The mean baseline FibroScan score was 14.78 kPa (SD=10.4). At 24-weeks post-treatment, we identified a reduction in FibroScan score of 13.83 kPa (SD=9.5), an improvement of 0.95 kPa. We observed a further improvement to a mean of 9.77 kPa (SD=8.3) at 48-weeks post-treatment, signifying a total mean decrease of 5.1 kPa between baseline and 48-week post-treatment scores. Among cirrhotic patients (n=11), we saw an even larger improvement from a mean of 23.05 kPa (SD=9.5) to 19.02 kPa (SD=9.3) at 24-weeks and 16.52 kPa (SD=10.3) at 48-weeks post treatment.

Table 1: Patient characteristics

Characteristics	Patients (n=23)
Mean age	53 (SD=7)
Male (n, %)	20 (87)
Caucasian (n, %)	17 (74)
Mean CD4 count	578 (SD=370)
Consume alcohol 2 or more times/week (n=12) (n, %)	3 (25)
Interferon-free Tx (n, %)	15 (65)
Mean duration of HCV infection (n=15)	16 years (SD=5)

Figure 1: Mean FibroScan Score

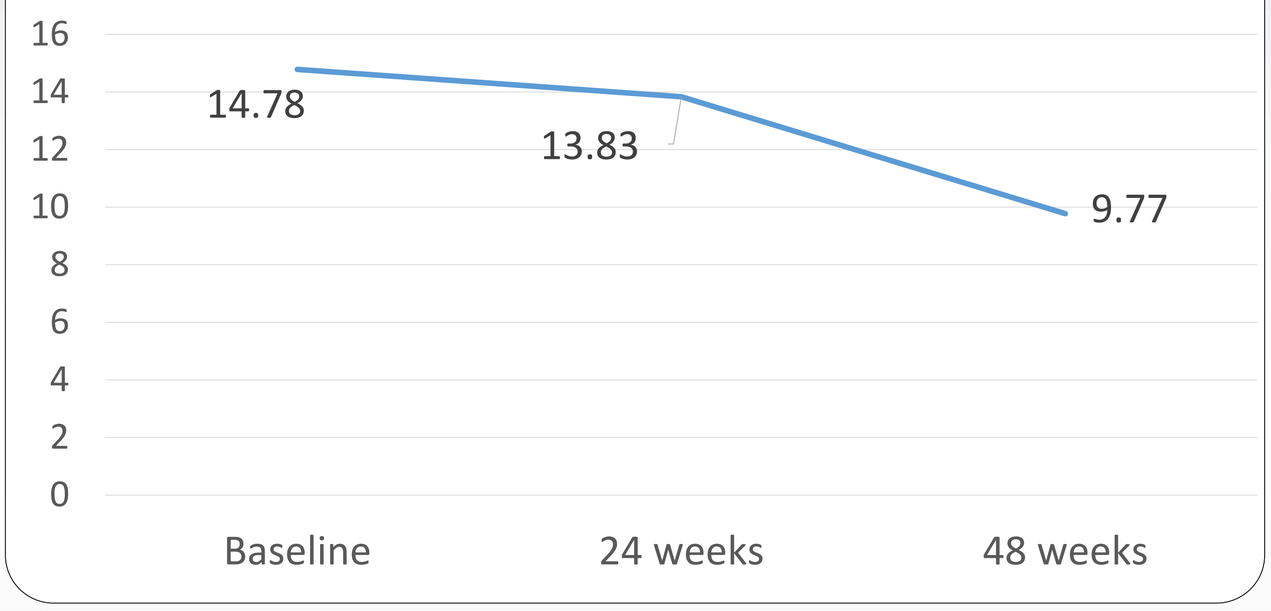
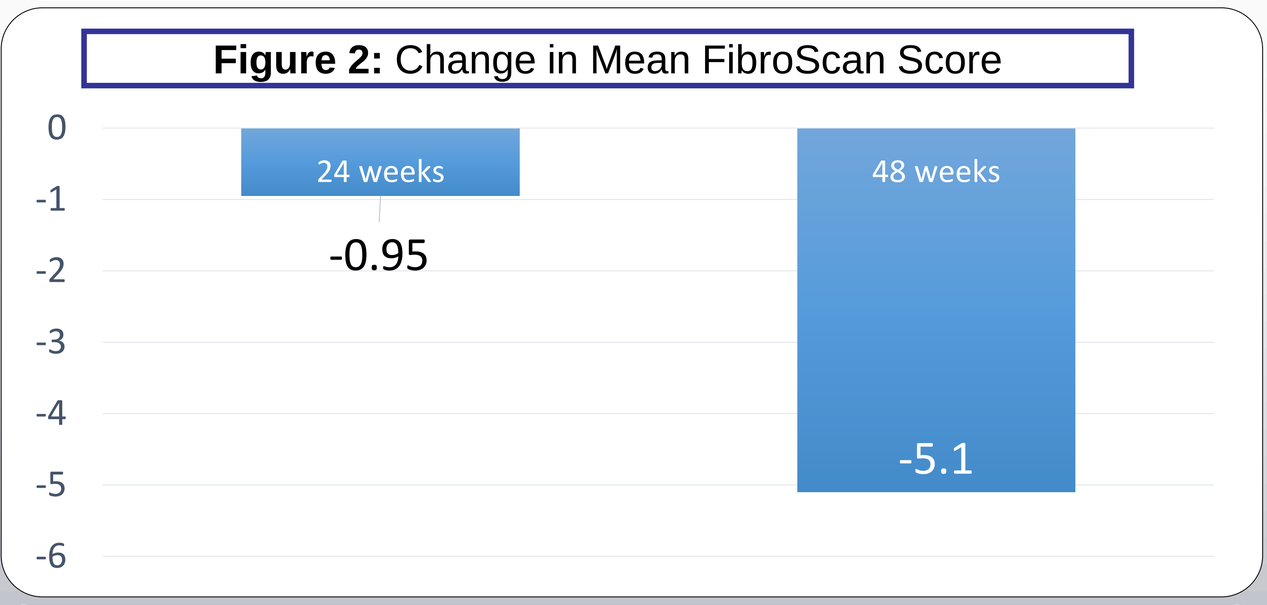


Figure 2: Change in Mean FibroScan Score



Conclusion

We observed a notable improvement in liver fibrosis following successful HCV therapy among HIV/HCV co-infected PWID. This provides an additional rationale for expanded access to treatment of HCV infection in this population.

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