Sustained Viral Response Outcomes in Chronic Hepatitis C Infected People Who Inject Drugs Who are Non-compliant with Recommended Treatment Regimens

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Background

Direct Acting Antivirals (DAA) are the standard for Hepatitis c (HCV) treatment and are efficacious in people who inject drugs (PWID), if taken for the recommended duration. However, sustained viral response (SVR_{12}) may still be achieved in cases where participants are non-compliant with the recommended regimen. ADVANCE HCV is an ongoing randomised clinical trial of DAA HCV treatment in PWID attending an injecting equipment provision site (IEPS) in Tayside, Scotland. Data presented shows the efficacy of non-compliant HCV treatment in ADVANCE HCV.

Methods

ADVANCE HCV participants are opportunistically recruited at two IEPS in NHS Tayside and randomised to one of three treatment pathways and stratified by gender and genotype (GT1 or GT3).

1. Directly Observed Therapy (DOT)
2. Fortnightly dispensed
3. Fortnightly dispensed with a one off, psychological intervention to promote treatment adherence

GT1 participants are treated with 12 weeks of elbasvir/grazoprevir (MSD, provided for the study) and GT3 with 8 weeks of elbasvir/grazoprevir plus sofosbuvir (Gilead, purchased by NHS Tayside).

If a participant misses 7 consecutive doses after commencing treatment, treatment is stopped. Those with shortened treatment were followed up to SVR_{12}. Any lost medication is not replaced and participants will have treatment shortened accordingly.

DOT is currently the 'gold standard' method of treating chronic HCV in PWID. ADVANCE HCV aims to show that fortnightly dispensing to this patient group is non-inferior to DOT. The primary outcome is SVR12 rates in each treatment pathway.

This study is currently recruiting and will continue until 135 participants have been randomised.

Results

To date, 104 participants have been randomised. 96 participants have initiated treatment. 83 have completed treatment.

Twenty-two of 83 had shortened regimens due to non-compliance and 19 were followed up to SVR_{12}. Thirteen of these participants are male (59%), 15 GT3 (68%) and 14 fortnightly dispensed treatment (64%). There are three participants with no SVR_{12} result yet. The comparison with the all participants who have completed treatment is displayed in the table below.

GT1 non-compliance (SVR_{12}); <2 weeks, 1 (0). Two weeks, 1 (1). Eight weeks, 2 (2). Ten weeks, 2 (2).

GT3 non-compliance (SVR_{12}); <2 weeks, 3 (0). Two weeks, 3 (0). Three weeks, 1 (0). Four weeks, 2 (2) . Six weeks, 4 (2).

Of participants who took >2 weeks treatment, 9/15 (60%) achieved SVR_{12}. Of those who took <2 weeks, 0/4 achieved SVR_{12}.

Twenty-two participants are yet to be tested for SVR_{12}. One participant died prior to their SVR_{12} test.

Of participants who were compliant with medication and who have an SVR_{12} result (n=40), 39 (98%) have successfully achieved SVR_{12}.

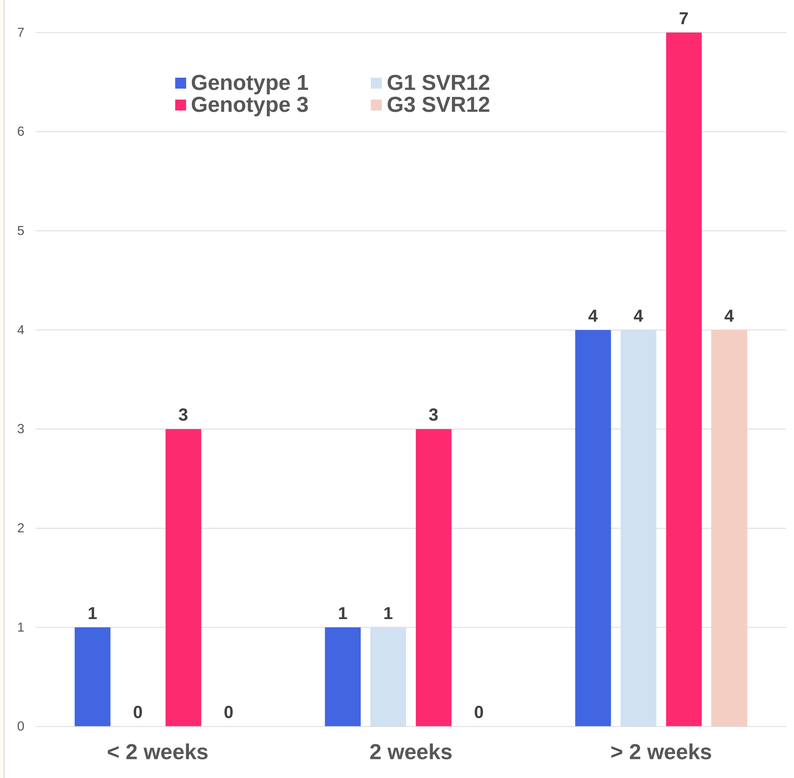
Results

Factor	Completed Treatment n = 83 (%)	Treatment Compliant Participants n = 61 (%)	Non-compliant Participants n = 22 (%)
Male	60 (72)	47 (77)	13 (59)
Genotype 3	55 (66)	39 (64)	15 (68)
Fortnightly Dispense	57 (69)	43 (70)	14 (64)

Factor	Compliant with Treatment + SVR12 Result n = 40 (%)	Non-compliant with Treatment + SVR12 Result n = 19 (%)
Male	28 (70)	11 (58)
Genotype 3	27 (68)	13 (68)
Fortnightly Dispense	25 (63)	12 (63)

Factor	Compliant + Achieved SVR12 n = 39 (%)	Non-compliant + Achieved SVR12 n = 9 (%)
Male	27 (69)	3 (33)
Genotype 3	26 (67)	4 (44)
Fortnightly Dispense	24 (62)	6 (67)

SVR_{12} v Treatment Duration



Conclusion & Discussion

Although the sample size is small, patient non-compliance with treatment is not always prohibitive to SVR_{12}. While the recommended regimens offer the greatest likelihood of SVR_{12}, PWID who do not comply with the full course of treatment, provided they have had over 2 weeks, should be followed up to SVR_{12} with some optimism.

The high SVR_{12} rate in participants who complied with the recommended treatment regimen for their HCV genotype further emphasises the importance of adherence to recommended DAA regimens.

The individual who completed treatment but did not achieve SVR_{12} was >5 months late for their test and could well be a re-infection, rather than a treatment failure.

In all scenarios, the majority of participants are; male, GT3 and on fortnightly dispensed treatment. This differs in the group who were non-compliant but achieved SVR_{12}, who are majority female and GT1.

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