Audit of eligibility of hepatitis C/HIV co-infected patients in the Lothian Regional Infectious Diseases Unit cohort for new HCV protease inhibitor containing regimen

Karen A Devine, David Whitely, Clifford Leen

Regional Infectious Diseases Unit, Western General Hospital, Edinburgh, UK

Introduction

• In HIV patients co-infected with hepatitis C (HCV), chronic end stage liver disease is a leading cause of hospital admission and death in the developed world.

•Treatment with current standard of care, Pegylated Interferon and Ribavirin (PegInf/Rbv) has poorer outcomes in HCV genotype 1 patients and is associated with haematological and neuropsychiatric side effects excluding many patients from treatment.

• New HCV protease inhibitors (PI) (Telaprevir and Boceprevir) used in combination with PegInf/Rbv in genotype 1 patients significantly improve sustained virologic response. Initial Phase 2 trial data suggest similar improvement in HIV co-infection.

• Pharmacokinetic studies show these new HCV protease inhibitors should not be used with most Ritonavir boosted PI's. Telaprevir can be used with dose adjusted boosted Atazanavir.

•A significant proportion of the Western General Hospital co-infected cohort are on a Ritonavir boosted PI based HARRT regimen. Several of these patients have psychiatric co-morbidities or previous severe side effects that may prohibit the use of PegInf/Rbv.

Aim

To assess the eligibility of the Lothian HIV cohort co-infected with genotype 1 HCV for treatment with a new HCV protease inhibitor containing regimen.

Methods

• The HIV Western General Hospital database was searched for all patients co-infected with HCV genotype 1 and divided into HCV treatment naive and experienced.

•The inclusion and exclusion criteria for consideration of a HCV PI containing regimen was based on recent pharmacokinetic data on boosted PI's and criteria used for the Phase 2 trials for Telaprevir and Boceprevir.

•Inclusion criteria; co-infection with genotype 1 HCV only, CD4 count> 200/mm^3, VL<40copies/ml,fibrosis of any grade, currently on or could be switched to a HAART regimen containing Tenofovir, Emtricitabine, plus boosted Atazanavir or Raltegravir.

•Exclusion criteria; current or previous significant untreated psychiatric disease, previous severe haematological or psychiatric side effects with side effects with PegInf/RBV, patients unable to switch to the HAART regimen above.

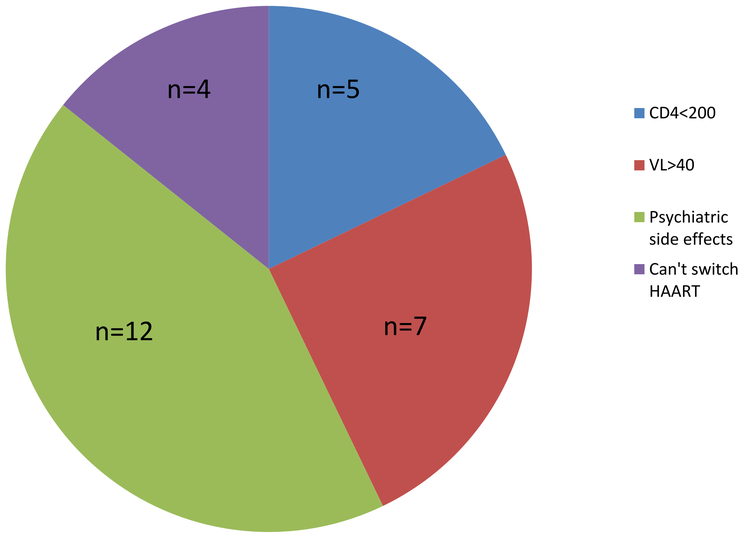
Results

Total cohort of HCV genotype 1 HIV co-infected patients **71**

Naive Patients

Number of HCV treatment naive patients **55**

Number of HCV treatment naive patients not eligible for treatment **23**



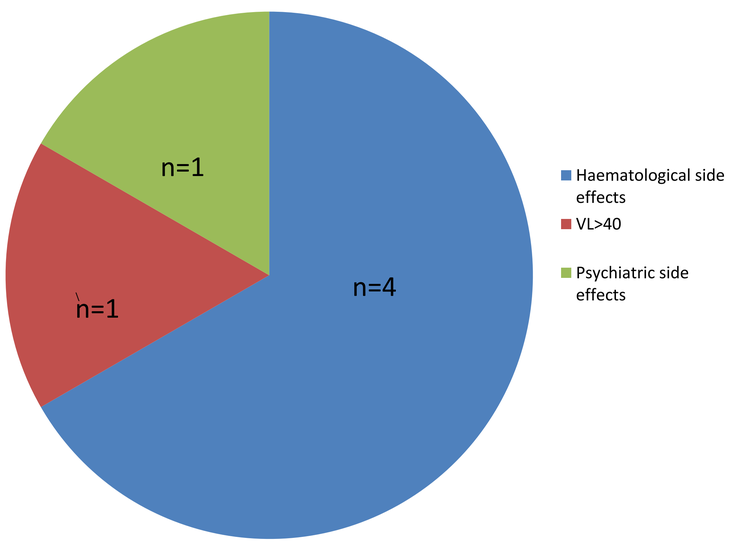
5 patients had more than one contraindication to treatment

Graph 1. Reasons why HCV treatment naive genotype 1 co-infected patients were not eligible for treatment

Experienced Patients

Number of HCV treatment experienced patients **16**

Number of HCV treatment experienced patients not eligible for treatment **6**



Graph 2. Reasons why HCV treatment experienced genotype 1 co-infected patients were not eligible for treatment

Conclusions

•Pre-existing psychiatric illness (12/23) was the most common cause of exclusion in the naïve group.

•Haematological toxicity with Interferon and Ribavirin (4/6) excluded most in the experienced group.

•A PegInf sparing regimen is required to significantly increase the numbers of genotype 1 HCV co-infected patients who can be treated in Lothian.

Discussion

•Telaprevir and Boceprevir based triple therapy of treatment-naïve and treatment-experienced HCV genotype 1 patients results in substantially increased SVR rates compared to PEG-INF-α and ribavirin alone

•This regimen does not negate the substantial issue of PegInf/Rbv side effects that make many patients unsuitable or decline treatment.

• The huge unmet need of a PegInf/Rbv sparing regimen may be addressed with a combination of direct acting antiviral agents (DDASs), which include PI's, currently in Phase 2 and Phase 3 trials. See Figure 1.

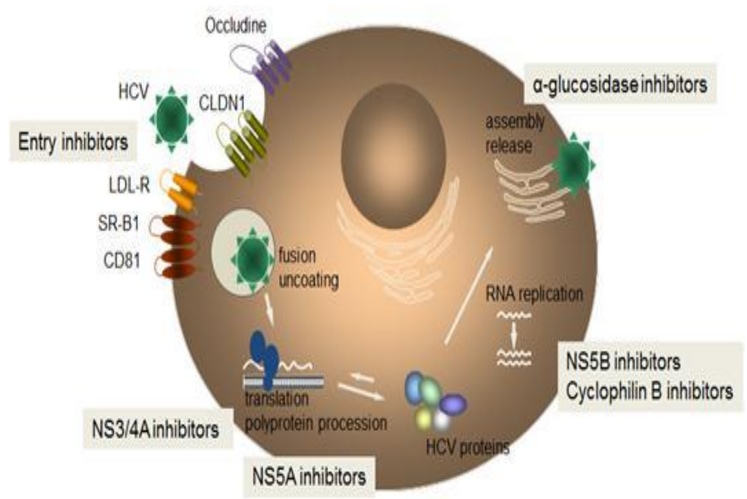


Figure 1. HCV Replication indicating Some of the current drug targets under Phase 2 and 3 trials.
Taken from Hepatology, a Clinical Textbook. 2012. Mauss et al

References

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