Background

- Outbreaks of acute HCV among HIV-positive men who have sex with men (MSM) have been reported.
- HCV co-infection contributes to morbidity and mortality and complicates patient management.
- Limited data is available on the impact of acute HCV co-infection on CD4 cell counts during chronic HIV infection.
- Objective: To study changes in CD4 cell counts before and after acute HCV infection but before the start of anti-HCV therapy, among both cART treated and untreated chronically HIV-infected patients.

Methods

HIV-1 infected MSM selected from the national observational ATHENA cohort with:

- Acute HCV co-infection: a negative HCV RNA test result followed within 1 year by a positive HCV RNA test result (midpoint = estimated date of HCV infection).
- At least 6 months between HIV diagnosis and HCV infection.

Outcome:

- CD4 cell counts 2 years prior and 1 year after the date of HCV infection.
- CD4 cell counts sampled after the start of anti-HCV treatment or after a change in the HIV treatment status (change from HIV untreated to treated with any HIV-antiretroviral or vice-versa) were censored.

Statistical analysis:

- CD4 cell counts were longitudinally modelled using:
  - mixed effects models.
  - pattern-mixture models (to account for possible bias arising from censoring CD4 cell counts after start of anti-HCV treatment). This model includes an interaction term with CD4 slope after HCV infection and timing of anti-HCV treatment initiation (< 6 months vs 6 months or more after HCV infection).
- Slopes were allowed to change at date of HCV seroconversion.
- A random intercept (representing CD4 cell counts at HCV infection) and 2 random slopes for each patient were included.
- HIV treatment status was included in all models.

Results

- Characteristics at HCV co-infection of the 39 included patients are shown in Table 1.
- Analyses included 360 CD4 cell counts.

Conclusions

- Acute HCV infection in cART-treated chronically HIV-infected patients may be associated with a decrease in CD4 cell counts.
- The small number of patients limited subgroup analyses.