Rapid decline of anti-hepatitis C virus (HCV) antibodies following early treatment of incident HCV infections in HIV-infected men who have sex with men

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OBJECTIVES
Following clearance of incident hepatitis C virus (HCV) infections, HCV antibody levels may decline, resulting in seroreversion. It is unclear to what extent HCV antibody level trajectories differ between patients with treatment-induced sustained virological response (SVR), those with spontaneous clearance and those with untreated replicating HCV infection. We investigated HCV antibody level dynamics in HIV-infected MSM with different clinical outcomes.

METHODS
We investigated anti-HCV antibody level dynamics following an incident HCV infection in 67 HIV-infected men who have sex with men (MSM) with different clinical outcomes: SVR (n = 33), spontaneous clearance (n = 12), and untreated replicating infection (n = 22). Antibody levels were measured at the time of HCV diagnosis, and at yearly intervals for 3 years thereafter.

RESULTS
At baseline, median HCV antibody levels were similar in the three groups: 13.4, 13.8 and 13.5 sample to cut-off (S/CO) for SVR, spontaneous clearance and untreated infection, respectively. Over 3 years of follow-up, SVR was associated with a more pronounced decrease in anti-HCV levels compared with spontaneous clearance and untreated infection [median decline 71% [interquartile range (IQR): 43-87%], 38% (IQR: 29-60%) and 12% (IQR: 9-22%), respectively; P < 0.001]. Seroreversions occurred in five of 33 (15%) patients with SVR and in one of 12 (8%) with spontaneous clearance. A shorter delay between time of infection and treatment start correlated with higher rates of decline in antibody levels. Seven patients experienced a reinfection.

CONCLUSIONS
Treatment-induced HCV clearance was associated with a more pronounced decline in anti-HCV antibody levels and with higher rates of seroreversion compared with spontaneous clearance or untreated replicating HCV infection
among HIV-infected MSM with incident HCV infections. Rapid clearance of HCV RNA following early HCV treatment might impair the development of persistent antibody titres.

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