Abstract:

Antiretroviral therapy (ART) has improved the survival of HIV patients but is also associated with unique manifestations of disease in some subjects during the initial months of therapy. Immune reconstitution inflammatory syndrome (IRIS) is a disorder among individuals starting ART, with no evidence-based treatment and management guidelines. We characterized HIV-1 and determined drug resistance among 14 Kenyan patients with suspected IRIS after ART initiation in 2005. Polymerase chain reaction, sequencing, and phylogenetic analysis of viral pol and env showed the following HIV-1 subtypes: A1/A1/A1 (pol-RT/gp41/C2V3), 5; A1/C/A1, 1; A1/D/A1, 2; D/A1/A1, 1; D/C/A1, 1; D/D/A1, 2; D/D/D, 1; and D/A1/A2, 1. Three patients had viruses with major drug resistance-associated mutations. These included nucleoside reverse transcriptase inhibitor (RTI) mutations: M41L, K65R, D67N, K70R, M184V, and K219Q, and nonnucleoside RTI mutations: K101P, L100I, K103N, and Y181C. Twelve patients harbored viruses that are predicted to use chemokine coreceptor 5 (CCR5) whereas two had variant viruses predicted to use the CXCR4 coreceptor. Drug resistance may not be the only cause of ART adverse events. HIV-1 characterization would be important before and during HIV therapy to avoid treatment failure.