5th International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV

A RETROSPECTIVE COHORT STUDY OF LIVER TOXICITY IN HEPATITIS B AND C HIV CO-INFECTED PATIENTS IN THE HIV ONTARIO OBSERVATIONAL DATABASE

E Phillips[1,2], J Raboud[2,3] and R Saskin[3]

[1]Sunnybrook and Women's College Hospital; [2]University Health Network; and [3]Mount Sinai Hospital, University of Toronto, Toronto, ON, Canada

Antiviral Therapy 2003; 8:L84 (abstract 127)

July 8, 2003

OBJECTIVES: To identify risk factors for significant hepatic dysfunction among HIV/hepatitis B virus (HBV) or hepatitis C virus (HCV) co-infected patients related to antiretroviral (ART) exposure.
METHODS: All HIV Ontario Observational Database (HOOD) patients that were chronic carriers of HBV or HCV were identified. ART medication and laboratory adverse event data were obtained through bi-annual chart reviews.
RESULTS: Four-hundred-and-four HIV-positive patients were identified as co-infected with HCV (*n*=317), HBV (*n*=104) or both HCV and HBV (*n*=17). Two hundred and forty-three (60%) and 249 (62%) of these patients had ever had grade 3 or 4 elevations in alanine aminotransferase (ALT) and aspartate aminotransferase (AST), respectively, versus 676 (41%) and 673 (41%) (*P*<0.001 and *P*<0.001) of those with HIV not co-infected. The median [interquartile range (IQR)] duration of infection with HCV and/or HBV at the time of initial identification of elevations in transaminases (AST/ALT) was 842 days (260–1780). The median (IQR) time after starting any ART to the development of grade 3 or 4 hepatic dysfunction was 896 days (216–1680). Grade 3 or 4 elevations in AST/ALT were significantly associated with ever taking: a boosted protease inhibitor (PI) (72% vs 59%, *P*=0.01), ritonavir (70% vs 51%, *P*=0.0001) and/or didanosine (ddI) (66% vs 56%, *P*=0.03), and a trend with ever taking stavudine (d4T) (63% vs 54%, *P*=0.06), but not with taking a nelfinavir-based regimen without previous exposure to ritonavir, d4T and/or ddI (61% vs 62%, *P*=0.96). Patients who had ever had grade 3 or 4 elevations in ALT/AST also had exposure to higher median numbers of all types of ARTs (6 vs 5, *P*<0.001), nucleoside reverse transcriptase inhibitors (4 vs 3, *P*=0.001), non-nucleoside reverse transcriptase inhibitors (1 vs 0, *P*=0.004) and PIs (2 vs 1, *P*=0.002).

CONCLUSION: A high proportion of HIV patients co-infected with HBV and HCV have serious elevations in transaminases which may be related to both type and cumulative exposure to ART. Patients exposed to boosted PI regimens, ddI and d4T appear to be at heightened risk, and patients on nelfinavir-based regimens without previous exposure to other PIs or ddI/d4T at lower risk, for serious hepatotoxicity.
Presenting author: E Phillips