



Scientists and Health Care Workers
Committed to HIV/AIDS

3rd International AIDS Society Conference on **HIV** Pathogenesis and Treatment

Rio de Janeiro - July 24 - 27, 2005

THE IMPACT OF CO-INFECTION WITH HEPATITIS C OR HEPATITIS B ON LOPINAVIR PHARMACOKINETICS IN PATIENTS INFECTED WITH HIV

IAS Conf HIV Pathog Treat 2005 Jul 24-27;3rd: Abstract No. WePe3.2C06

Dickinson L.¹, Micheli V.², Meraviglia P.², Tjia J.¹, Almond L.¹, Regazzi M.³, Back D.¹,
Cargnel A.²

¹University of Liverpool, Liverpool, United Kingdom, ²Sacco Hospital, Milan, Italy, ³IRCCS-Policlinico S. Matteo, Pavia, Italy

INTRODUCTION: Protease inhibitors-based regimens can induce hepatotoxicity. Liver disease may alter the pharmacokinetics (PK) of antiretrovirals that under-go hepatic metabolism and could produce changes in plasma protein binding. The protease inhibitor lopinavir (LPV) is a cytochrome P450 substrate and highly bound to plasma proteins (98 – 99%). The aim of this study was to evaluate LPV total and unbound PK in HIV-infected patients with and without HCV/HBV co-infection.

METHODS: Forty-one patients receiving boosted lopinavir (LPV/RTV: 400/100mg bid, $n=33$; 533/133mg bid, $n=3$; 266/66mg bid, $n=5$) therapy [14 HIV+ controls; 27 HCV/HBV co-infected (7/27 cirrhotic); 10 females; median (range) age 43 years (32 – 64)] participated in the study. LPV PK assessment was performed at steady-state. Bound and unbound LPV were separated by ultrafiltration and total and unbound LPV concentrations quantified by a validated HPLC-UV and HPLC-MS/MS method, respectively. Total and unbound LPV area under the curve over the dosing interval (AUCTOTAL and AUCUB, respectively) was calculated (non-compartmental analysis; WinNonlin). AUCUB was expressed as a percentage of AUCTOTAL (%AUCUB). Differences in PK between patients with and without HCV/HBV co-infection were evaluated (Mann-Whitney U test).

RESULTS: Thirty-nine patients were included in the analysis (13 HIV+ controls; 26 HCV/HBV co-infected). Median (range) AUCTOTAL, AUCUB and %AUCUB for HIV+ controls and HCV/HBV co-infected patients were 107150 (61069 – 149908) and 92114 ng.h/mL (33160 – 204750), 851 (510 – 1657) and 1073 ng.h/mL (413 – 2181), 0.96% (0.35 – 1.19) and 1.02% (0.60 – 2.22), respectively. There were no statistically

significant differences in AUCTOTAL, AUCUB and %AUCUB between study groups ($p=0.51$, 0.53 and 0.18 , respectively). AUCTOTAL, AUCUB and %AUCUB in cirrhotic patients were 87130 ng.h/mL, 821 ng.h/mL and 1.11% ; these were not statistically different to controls ($p=0.35$, 0.77 , 0.31 , respectively).

CONCLUSIONS: In the cohort of patients studied, LPV total and unbound PK was not affected by hepatic impairment. Given the small number of cirrhotic patients, further studies are warranted to characterise LPV PK in this group.

050724
Clinical | WePe3.2C06 | Valeria Micheli
Pharmacological Monitoring Of Arv Therapy

Copyright © 2005 - [International AIDS Society](#) (IAS). All information and content relating to the abstracts from the 3rd International AIDS Society Conference on HIV Pathogenesis and Treatment, such as text, graphics, logos, button icons, images, audio clips, and software is protected by copyright. Permission is hereby granted for the non-commercial use or reproduction of the information on this web site, provided that the use of such information is accompanied by an acknowledgement that IAS is the source of the information and the name of the author of the article.

AEGiS is made possible through unrestricted grants from [Boehringer Ingelheim](#), [Bridgestone/Firestone Charitable Trust](#), [Bristol-Myers Squibb Company](#), [Elton John AIDS Foundation](#), the [National Library of Medicine](#), and [donations](#) from users like you. **Always watch for outdated information. This article first appeared in 2005. This material is designed to support, not replace, the relationship that exists between you and your doctor.**

AEGiS presents published material, reprinted with permission and neither endorses nor opposes any material. All information contained on this website, including information relating to health conditions, products, and treatments, is for informational purposes only. It is often presented in summary or aggregate form. It is not meant to be a substitute for the advice provided by your own physician or other medical professionals. **Always discuss treatment options with a doctor who specializes in treating HIV.**

Copyright ©1980, 2005. AEGiS. All materials appearing on AEGiS are protected by copyright as a collective work or compilation under U.S. copyright and other laws and are the property of AEGiS, or the party credited as the provider of the content. Permission is hereby granted for the non-commercial use or reproduction of the information herein, provided that the use of such information is accompanied by an acknowledgement that IAS is the source of the information and the name of the author of the article.