Journal of the International AIDS Society

Oral presentation

Open Access

# O312 Cardiovascular disease; HIV, ART, immunodeficiency, pro-inflammation and other factors

JD Lundgren

Address: Copenhagen HIV Programme (CHIP), University of Copenhagen, Copenhagen, Denmark
*from* Ninth International Congress on Drug Therapy in HIV Infection
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

*Journal of the International AIDS Society* 2008, **11**(Suppl 1):O28 doi:10.1186/1758-2652-11-S1-O28

This abstract is available from: http://www.jiasociety.org/content/11/S1/O28

© 2008 Lundgren; licensee BioMed Central Ltd.

The age-and gender-adjusted incidence of cardiovascular disease is higher in HIV-infected populations than in the general population. This talk will discuss the possible reasons for this excess risk, and suggest rational approaches of how best to reduce it. Risk factors for cardiovascular disease in HIV-infected persons can be broadly separated into: (1) those affecting risk in the general population (age, gender, smoking, diabetes, hypertension, dyslipidaemia); (2) those caused by the underlying HIV infection and the associated immunodeficiency (interruption of antiretroviral therapy activates coagulation and inflammatory pathways); and (3) those caused by the use of ART (either directly or indirectly by affecting e.g. lipid levels). The traditional risk factors (category 1) appear to affect cardiovascular risk to a similar extent in HIV-infected populations as they affect the risk in the general population; however, the prevalence is higher in HIV-infected populations predominantly because of differences in life-style behaviours, but ART also contributes. There are emerging signals that some antiretroviral drugs may adversely affect cardiovascular outcomes; such signals are currently under investigation. Other drugs may increase 'beneficial' HDL-cholesterol, although it remains to be determined whether this affects cardiovascular outcomes. On balance, the existing knowledge suggests that all three categories contribute to cardiovascular risk in HIV-infected populations. No evidence-based interventions to curtail the risk of cardiovascular disease risk in HIV-infected populations exist. The best recommendation is currently to extrapolate knowledge from the general population in managing modifiable traditional risk factors. Also, it is recommended not to interrupt antiretroviral therapy once initiated, and to consider modifying the composition of the antiretroviral regimen if components hereof are believed to contribute to elevated cardiovascular disease per se or to elevation of LDL-lipid fractions. The benefit:risk ratio for the various medical interventions are most striking in patients at elevated underlying risk of cardiovascular disease, and stratification of populations according to their underlying risk hence required http://www.cphiv.dk/TOOLS.aspx. ART should be initiated in asymptomatic antiretroviral naïve patients with CD4 counts <350 cells/μL. A randomised trial is currently being initiated to address whether earlier initiation of ART – in the course of the chronic HIV-infection – may reduce the risk of serious non-AIDS events including cardiovascular disease. Until this trial has been completed, there remains uncertainty whether earlier use of ART than what is currently recommended is beneficial.