TOP THINGS TO KNOW
Cardiovascular Disease in HIV-infected Patients

1. Use of antiretroviral therapy (ART) has decreased overall mortality associated with HIV remarkably, but cardiovascular disease (CVD) now accounts for a growing proportion of the deaths among HIV patients.

2. The relative risk of MI in HIV compared to non-HIV subjects is increased approximately 1.7-1.8 fold. This excess risk may increase further with advancing age.

3. HIV disease itself is associated with dyslipidemia (primarily increases in triglycerides and reductions in HDL).

4. Studies have shown the increase in CVD among HIV-infected patients is associated with the use of specific ARTs, metabolic abnormalities related to ART use such as diabetes and dyslipidemia and, importantly, traditional risk factors including smoking which is prevalent among HIV infected individuals.

5. There is significant variation with respect to CV effects in a given antiretroviral class. The contributions of these changes to cardiovascular risk may vary depending on the presence of other risk factors. Various ART treatments have been shown to increase triglyceride levels, reduce glucose disposal, contribute to insulin resistance, result in mitochondrial dysfunction, lead to subcutaneous fat loss and lead to insulin resistance.

6. Despite the association of ART use with CVD, the long-term effects of continuous ART are unknown. Continuous suppression of viral load may have additional benefits beyond the known clinical advantages, such as reduction of inflammation or other undefined beneficial effects. Further research is needed to answer this important question.

7. The Framingham Risk Score is reasonably accurate in predicting CVD events in patients with HIV but may under-predict MI’s among the large group of HIV-infected patients who smoke. Prediction might be improved upon using HIV specific equations, but these have not yet been validated.

8. Progressive LV dilation in HIV-infected children without adequate compensatory hypertrophy results in excessive LV afterload, reduced LV function, and symptomatic cardiovascular disease.

9. Nonatherosclerotic heart disease, including pulmonary hypertension, pericardial disease and reduced cardiac contractility may result from both HIV infection and ART therapy.

10. Strategies to prevent CVD in HIV infected patients should focus on reduction of traditional risk factors, as well as HIV and ART specific risk factors. Because of virological resistance that may develop due to changes in ART, caution should be exercised in changing individual drugs and the balance of risk to benefit must be assessed. Use of agents for lipid lowering, insulin sensitization, and reduction of central adiposity as well as lifestyle strategies such as smoking cessation may improve individual CV risks in the HIV population.


© 2008, American Heart Association. All rights reserved.