Endothelial dysfunction—An important factor in the progression of atherosclerosis in HIV-infected persons

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Abstract

The antiretroviral therapy has remarkably modified the process of HIV disease, enhancing higher quality of life and longer survival, however it has contemporaneously lead to the occurrence of earlier unrecognized complications, such as endothelial dysfunction and cardiovascular events.

The endothelial dysfunction is directly caused by HIV-induced endothelial cell death (effects on metabolism, increase level of proinflammatory cytokines and adhesion molecules).

Endothelial dysfunction accelerates the process of atherosclerosis and causes an increase of cardiovascular risk.

In addition, HIV-infected patients who are coinfect ed with HCV have higher cardiovascular risk as a result of the increase of serum levels of VCAM-1 and ICAM-1, and production of inflammatory cytokines and lipids. Despite the treatment effects of antiretroviral therapy on HIV-positive patients, some drugs cause endothelial damage and increased risk of heart disease.

This review attempts to summarize the HIV infection mechanism and other factors associated with infection and treatment that affect the endothelium resulting in cardiovascular events.

Keywords:
HIV; Endothelial dysfunction; HAART; Atherosclerosis; Coinfection HIV/HCV