Body Fat Changes May Bring Metabolic Ills in HIV

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BARCELONA — Changes in body fat may underlie the higher risk of metabolic complications observed in HIV-positive people, Dr. Esteban Martinez said at an international congress on prediabetes and the metabolic syndrome.

Antiretroviral therapy (ART) has changed HIV infection from a rapidly fatal disease into a chronic condition, but this has resulted in an aging population of HIV-positive individuals that seems to be at higher-than-expected risk of diabetes and cardiovascular disease, said Dr. Martinez of the Hospital Clinic at the University of Barcelona. Over time, this problem will become more significant as a larger number of people live with the infection.

One of the observations to result from studies of long-living individuals with HIV is the development of body fat changes, including the thinning of extremities, loss of subcutaneous fat, potential for accumulating fat in the abdomen, and a risk of accumulating fat in the "buffalo hump" at the top of the shoulders. "These abnormalities might be associated with metabolic problems," Dr. Martinez said.

HIV is known to decrease plasma concentrations of cholesterol—both low- and high-density lipoproteins—and induce fat loss. However, the initiation of ART induces fat gain followed by limb fat loss. "After a certain time point, some patients will experience a small loss of central abdominal fat, which then becomes stable, but the limb fat goes right down, which can change the way people look," Dr. Martinez said. Lipid values go up, in some cases above prestudy values, he added. "For any ART that is going to be initiated in a patient, you can expect lipids to increase." But the magnitude of the increase depends on the type of therapy used.

Insulin resistance also is common in patients with lipodystrophy and is associated with limb fat loss. Dr. Martinez reported a small study (J. Acquir. Immune Defic. Syndr. 2000;25:312-21) of 15 patients with HIV-associated lipodystrophy, 14 HIV-infected people without fat changes, and 12 non–HIV-infected controls. Low insulin sensitivity was closely associated with the loss of peripheral fat in the HIV and lipodystrophy group, Dr. Martinez said. ■

Antiretrovirals Found to Impair Lipid Lowering

LOS ANGELES — HIV-positive patients on antiretroviral therapy who are prescribed lipid-lowering agents do not respond to those drugs as well as other patients do, according to a large retrospective study by Kaiser Permanente.

The HIV patients were only 57% as likely to reach the National Cholesterol Education Program's Adult Treatment Panel III (ATP-III) lipid goals with treatment, compared with patients not HIV infected, Michael Silverberg, Ph.D., and his colleagues said in a poster presentation at the 14th Conference on Retroviruses and Opportunistic Infections.

The HIV patients also had a mean drop in total cholesterol that was lower than the change in controls (18% vs. 22%), as well as lower drops in LDL cholesterol (22% vs. 24%) and in triglycerides (36% vs. 53%).

Few previous studies have investigated the response of HIV patients on antiretroviral therapy to lipid-lowering treatment, said Dr. Silverberg of the division of research, Kaiser Permanente Northern California, Oakland. Their investigation analyzed data from all the HIV patients in their health system seen between 1996 and 2005 who met the ATP-III definition of dyslipidemia, and compared them each with 10 controls, matched for age, sex, and first year of lipidemia, who also received lipid-lowering therapy.

The study also found that HIV patients on a regimen of a protease inhibitor plus a nonnucleoside reverse transcriptase inhibitor had the lowest reductions in total cholesterol and triglycerides of any of the HIV patients. Their mean reduction in total cholesterol was 17%, and their mean reduction in triglycerides was 16%.

The most common lipid-lowering therapy used in the patients and the controls was a statin, and pravastatin was used more commonly in the HIV patients than in the controls, Dr. Silverberg said.

—Timothy F. Kirn

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