Heart of the Matter

Abnormal blood fats may foretell heart trouble for PWAs on protease

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Laboratory analyses of blood and other medical measurements help health practitioners to make diagnoses and people with HIV track their health. Joseph Sonnabend, MD, is a longtime AIDS researcher and clinician who has pioneered many important directions in patient management. He analyzes the blood chemistry results of his patient, POZ founder Sean O. Strub.

Sean's latest blood chemistry lab results are certainly encouraging in many ways. Most of the values are in the normal range, indicating that his total approach is working to improve his overall health. And this includes both his drugs—indinavir (Crixivan), d4T (Zerit) and delavirdine (Rescriptor)—and the other aspects of his program (stress reduction, good diet and exercise). But with this disease, it is never appropriate to relax one's vigilance, and one of Sean's values particularly concerns me—his elevated triglycerides.

Abnormally high triglycerides (a form of fat) are emerging as part of the odd lipid (fat) metabolism that seems to result from the use of protease inhibitors. This is superimposed on the already high triglycerides and low HDL cholesterol (high-density lipoprotein, the good kind that helps prevent heart attacks) and commonly seen in PWAs (including Sean) prior to protease inhibitors. And in the case of total cholesterol, the formerly widespread low levels have now largely switched to high levels. Research has shown that all these signs point to the possibility of accelerated heart disease.

In the past, we have been so focused on HIV and its effects that inadequate attention has been paid to other aspects of PWAs' health. Now that so many people with HIV are living longer, it's important to remember that there are other possible causes of illness and death. I was recently sensitized to this by the heart attack suffered by one of my patients—at the relatively early age of 40—about a year after beginning Crixivan. True, this patient had other risk factors: He smoked and had a family history of heart disease. But it's very likely that his blood fat abnormalities contributed to his heart disease.

It seems clear that those using protease inhibitors should have regular lipid profiles run—tests that look at levels of triglycerides, as well as HDL cholesterol, LDL cholesterol (low-density lipoprotein, the bad kind that promotes heart disease) and the ratio between total cholesterol and HDL. (To ensure accuracy, one must fast for 12 hours before blood is drawn.) If abnormalities such as

substantially elevated triglycerides, low HDL, high LDL or a cholesterol/HDL ratio in a moderate or high risk category (specific values vary with age and gender) are found, it is important to try to eliminate other risk factors, to the greatest extent possible. Depending on the patient, this might include reducing saturated fats in the diet, increasing exercise and stopping smoking. Some physicians are also prescribing drugs to lower cholesterol.

Although Sean's level of triglycerides (283) is not in the astronomically high range seen in some people on protease inhibitors—and, in fact, is still in the moderately elevated range that it was prior to his beginning a cocktail—I would still recommend that he look at whether he can improve his diet and his exercise program. I would also recommend that Sean or anyone else doing androgenic hormone therapies (including testosterone and other anabolic/androgenic steroids) carefully monitor their hematocrit level—the percentage of blood volume composed of red blood cells—over time to ensure that it's not abnormally high. Luckily, Sean's remains normal (44.2), but use of such hormones can sometimes lead to this increased red blood cell mass, which can in turn lead to an increased risk of heart attack. Regular monitoring of blood pressure should also be a given.

Anyone benefiting from protease inhibitors should simply do everything possible to eliminate other risk factors for heart disease—and thus maintain the overall good health that we hope will keep them here for the next rounds of drug breakthroughs.
