Abstract

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Lipoprotein management in patients with cardiometabolic risk - Consensus statement from the American Diabetes Association and the American College of Cardiology Foundation.

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BACKGROUND: Risk factors for type 2 diabetes and cardiovascular disease (CVD) often cluster, including obesity (particularly central), insulin resistance, hyperglycemia, dyslipoproteinemia, and hypertension. These conditions can also occur in isolation, and they are exaggerated by physical inactivity and smoking. Since each of these factors increases risk of CVD, the concept of global cardiometabolic risk (CMR) is of value.

DISCUSSION: Lipoprotein abnormalities, including elevated triglycerides, low HDL cholesterol, and increased numbers of small, dense LDL particles, are common findings in patients with CMR. Clinical entities with increased CMR include type 2 diabetes, familial combined hyperlipidemia, familial hypoalphalipoproteinemia, and polycystic ovary syndrome. These disorders often share the CMR characteristics of central obesity, insulin resistance, dyslipoproteinemia, and hypertension. There are stringent lipid treatment goals for patients with type 2 diabetes or CVD; however, guidelines for treatment of dyslipoprotienemia in high-risk subjects without diabetes or CVD are less intense and are based primarily in LDL cholesterol concentrations, with non-HDL concentrations a secondary consideration in some subjects. Numerous trials have demonstrated that therapies (primarily statins) directed at LDL cholesterol lowering clearly reduce risk of CVD events in patients with diabetes and in those without diabetes but with other CVD risk factors; yet, a number of questions remain. Even with adequate LDL cholesterol lowering, many patients on statin therapy have significant residual CVD risk. It is unclear whether lipoprotein parameters other than LDL or non-HDL cholesterol provide clinically significant additional prognostic information regarding CVD risk, yield more information about the effectiveness of therapy, or indicate more appropriate treatment targets. Many patients with CMR or diabetes have relatively normal levels of LDL cholesterol but increased numbers of small dense LDL particles and other atherogenic lipoproteins.

CONCLUSION: Some have advocated that assessment of other lipoprotein parameters might be more helpful than assessment limited to LDL or non-HDL cholesterol in these populations. In addition, treatment targets and the best approach for CVD risk reduction in this population need to be better defined. To address these issues, the American Diabetes Association convened a consensus development conference on 18-20 July 2007 focusing on lipoprotein management in patients with CMR.

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