APOLIPOPROTEIN B IN TYPE 1 DIABETES

Reduction of cardiovascular complications as a result of dyslipidemia in patients with diabetes mellitus is achieved through tight glycemic control and the use of lipid-lowering therapies. A new study of cardiovascular disease (CVD) risk and response to lipid-lowering therapy suggests that apolipoprotein B is a more appropriate indicator than LDL cholesterol.

Mazanderani *et al.* examined lipid parameters, such as apolipoprotein B, HDL cholesterol, LDL cholesterol and triglycerides, as well as HbA_{1c} of 169 adult patients with type 1 diabetes mellitus (T1DM). Patients who had received lipid-lowering therapy or had a history of CVD were not included in the analysis.

The investigators found that lipid profiles of patients with T1DM were normal or even protective compared with healthy individuals. Mean HbA_{1c} concentrations indicated intermediate to well-controlled glucose levels, and lipid levels and HbA_{1c} were not correlated. These results suggest that cardiovascular complications in patients with T1DM might be a result of poor glycemic control or differences in lipid phenotypes rather than dyslipidemia per se.

The study also revealed a substantial difference in the number of patients classified as high risk for CVD according to their apolipoprotein B or LDL cholesterol levels; 62% of male and 66% of female patients with T1DM who exhibited high LDL cholesterol levels did not have elevated mean apolipoprotein B concentrations. "Guidelines are increasingly geared towards recommending LDL cholesterol level as an indicator of CVD risk and need for initiation of lipid-lowering therapy," warns lead author Mazanderani. In other words, if LDL cholesterol alone is used to determine the need for lipid-lowering therapy, patients with T1DM might be prescribed lipid-lowering therapy unnecessarily.

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