

Clinical Evidence of Lipid Management in Diabetic Patients

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More than 170 million people worldwide have diabetes mellitus, and this number is predicted to double, at least, by 2030. The rapid rise in prevalence is mainly attributable to an increased incidence of type 2 diabetes owing to the increased number of overweight and obese people. Since both types of diabetes (1 and 2) are associated with a markedly increased risk of atherosclerotic vascular disease identification of treatments for the prevention of major occlusive vascular events is a public-health priority.

Both types of diabetes are associated with dyslipidaemia, but the patterns differ between them. In type 2 diabetes, triglyceride concentrations are high but HDL cholesterol concentrations tend to be low, whereas in type 1 diabetes triglyceride concentrations are generally lower than those in type 2 diabetes, and HDL cholesterol levels are average or even higher. In both diseases, the concentration of LDL cholesterol in the blood is generally similar to the population average, although this apparently benign pattern can mask an increase in atherogenic small dense LDL particles. Observational studies in different populations have shown that a positive log-linear relation exists between blood LDL cholesterol and the risk of coronary heart disease, with this association continuing well below the range of typical cholesterol levels in developed countries. For example, in around 360 000 men who were screened for the Multiple Risk Factor Intervention Trial (MRFIT), a 1 mmol/L lower blood total cholesterol was associated with about a 50% lower risk of death from coronary heart disease, irrespective of blood cholesterol at baseline. In the 5000 men who had reported a history of diabetes at the baseline assessment for MRFIT, the relation between blood cholesterol and risk of coronary mortality was of similar magnitude, but the absolute risk of coronary mortality was three to five times higher than it was in those without diabetes. A large body of evidence shows that lipid lowering therapy is beneficial independent of the starting level of LDL cholesterol and the efficacy is linear with the decrease of LDL cholesterol achieved.

This relation is true also in diabetes; a population that benefits in relative terms as the others that have been treated with hypolipidaemic drugs but in absolute terms the benefit is more rewarding as compared to the average at risk population according to the high level of cardiovascular risk of diabetics.