Cardio DIGEST
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Editorial

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CV risk factor control in type 2 diabetes – does ACCORD help?

People with type 2 diabetes and no cardiovascular (CV) disease have been considered to be at CV risk equivalent to people without diabetes who have already experienced a CV event (Haffner et al, 1998). Consequently, aggressive risk factor management has been advocated by a number of august guidelines. Clinical diabetes management in recent years has been informed by the results of three landmark studies: the UKPDS (UK Prospective Diabetes Study; UKPDS Group, 1998) and its 10-year follow-up (Holman et al, 2008), the ADVANCE (Action in Diabetes and Vascular Disease: Preterax and Diamicron-MR Controlled Evaluation) Study (ADVANCE Collaborative Group et al, 2008) and the ACCORD (Action to Control Cardiovascular Risk in Diabetes) study (ACCORD Study Group et al, 2008). The impact of improved glycaemic control on the reduction of microvascular disease was clearly demonstrated by these trials. The impact of improved glycaemic control on macrovascular disease remains debated. Indeed, the initial presentations from the ACCORD study suggested an increase in mortality in the intensively treated group (ACCORD Study Group et al, 2008), although subsequent meta-analysis failed to reveal this increased risk and indeed suggested a protective effect of improved glycaemic control in macrovascular disease (Ray et al, 2009).

More recent results have been published from the ACCORD study, the design of which allowed for examination of intensive versus conventional glycaemic control and also effects of intensive blood pressure and lipid control (ACCORD Study Group et al, 2010a; 2010b). In the blood pressure arm, the effects of systolic blood pressure <120 mmHg versus <140 mmHg was assessed in participants – one-third of whom had established CV disease. After a follow-up period of 4.7 years, no significant inter-group difference in the primary endpoint of non-fatal myocardial infarction, non-fatal stroke or death were observed. However, a beneficial effect was seen in secondary endpoint of fatal stroke among those with a systolic blood pressure <120 mmHg compared with <140 mmHg. The authors also demonstrated a lower incidence of major coronary disease events compared with previous studies and a lower rate of stroke compared with coronary artery disease.

In the ACCORD lipid study (ACCORD Study Group et al, 2010b), people with type 2 diabetes were randomised to receive either simvastatin alone of simvastatin and fenofibrate. The aim of the fenofibrate therapy was to reduce plasma triglyceride levels and increase plasma HDL-cholesterol in those already receiving a statin to reduce plasma LDL-cholesterol. Overall, the addition of fenofibrate to simvastatin did not result in a significant improvement in the primary composite endpoint, as described above. However, benefit of fenofibrate addition was seen in participants who had elevated triglyceride levels (>2.3 mmol/L) and low HDL-cholesterol (≤0.88 mmol/L).

This newer evidence suggests that a systolic blood pressure target <120 mmHg in people with type 2 diabetes is not appropriate. Likewise, the addition of fenofibrate to simvastatin is not to be undertaken routinely – although there is some evidence to suggest benefits in combination therapy in those with a particularly arthogenic profile, in whose total cholesterol has been reduced with statin therapy but total triglyceride remains elevated and HDL-cholesterol remains low. Further therapeutic trials will extend our knowledge, however it is clear that we are improving individualised therapy for risk factor management in people with type 2 diabetes.

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