Cardio DIGEST
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Editorial

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More clarity from ACCORD, or just more questions?

A number of studies have examined the effect of blood pressure control in type 2 diabetes, including the UKPDS (UK Prospective Diabetes Study; UKPDS Group, 1998) and the ADVANCE (Action in Diabetes and Vascular Disease: Preterax and Diamicron-MR Controlled Evaluation) Study (ADVANCE Collaborative Group et al, 2008). Recently, the results of the ACCORD (Action to Control Cardiovascular Risk in Diabetes) blood pressure study were published (ACCORD Study Group et al, 2010a).

The ACCORD Study Group evaluated the potential benefit of targeting systolic blood pressure to <120 mmHg versus <140 mmHg in people with type 2 diabetes – a third of whom had already experienced a cardiovascular event. While the event rate was lower than expected in the ACCORD blood pressure study, after 4.7 years of follow-up there was no significant difference in the primary composite endpoint of non-fatal myocardial infarction, non-fatal stroke, or death from cardiovascular disease between the two groups. However, a beneficial effect was shown for the secondary endpoint of any or non-fatal stroke. Once again, it is worth reiterating that the actual event rates for stroke were low.

Thus, the results of the ACCORD blood pressure study leaves the issue of optimal blood pressure levels in people with type 2 diabetes unresolved. Many guidelines continue to support the target of 130/80 mmHg in this population, although the figure has not been corroborated by randomised controlled trials.

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The ACCORD lipid study (ACCORD Study Group et al, 2010b) examined the effect of the addition of fenofibrate or placebo to pre-existing simvastatin treatment, with the goal of reducing plasma triglyceride levels and increasing plasma HDL-cholesterol in those already taking statins. Overall, the addition of the fibric-acid derivative to simvastatin did not result in a significant improvement above the primary composite endpoint. However, there was a trend toward a benefit from fenofibrate in those who had an elevated triglyceride level (>2.3 mmol/L) and an HDL-cholesterol level <0.88 mmol/L. This, of course, is a lipid profile reminiscent of that seen in people with type 2 diabetes and, consequently, the use of fenofibrate may be advocated in that population. Ultimately, the use of fibric-acid derivatives for correcting dyslipidaemia in people with diabetes remains controversial in the light of the ACCORD lipid study results.

Unfortunately, the ACCORD studies examining the effect of aggressive blood pressure control (ACCORD Study Group et al, 2010a) and the addition of fibric-acid derivatives to pre-treatment statins (ACCORD Study Group et al, 2010b) produce more questions than answers. To date, it is unlikely that our clinical practice would be changed significantly by the results – and, once again, there is a need for further, larger long-term trials.

ACCORD Study Group, Cushman WC, Evans GW et al (2010a) Effects of intensive blood-pressure control in type 2 diabetes mellitus. *N Engl J Med* **362**: 1575–85

ACCORD Study Group, Ginsberg HN, Elam MB et al (2010b) Effects of combination lipid therapy in type 2 diabetes mellitus. *N Engl J Med* **362**: 1563–74

ADVANCE Collaborative Group, Patel A, MacMahon S et al (2008) Intensive blood glucose control and vascular outcomes in patients with type 2 diabetes. *N Engl J Med* **358**: 2560–72

UKPDS Group (1998) Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* **352**: 837–53

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