

DIABETES

Effects of strict glycaemic control on ischaemic heart disease

Patients with diabetes mellitus are at increased risk of ischaemic heart disease, but the benefits or risks of intensive glycaemic control on cardiovascular outcomes are uncertain. A new *post-hoc* analysis from the ACCORD trial indicates that intensive glycaemic control might be associated with a reduced risk of myocardial infarction, coronary revascularization, and unstable angina.

In the ACCORD trial, 10,251 patients with type 2 diabetes were randomly allocated to receive intensive or standard glycaemic control—a target glycated haemoglobin (HbA_{1c}) level <42 mmol/mol (<6.0%) or 53–63 mmol/mol (7.0–7.9%), respectively. Active treatment during the trial period lasted 3.7 years, and patients were then followed up for another 1.2 years.

The *post-hoc* analysis was not prespecified and, therefore, the findings should be considered hypothesis-generating. Over the full follow-up period (mean 4.8 years), patients receiving intensive therapy, compared with those receiving standard therapy, were less likely to experience a nonfatal myocardial infarction (HR 0.81, $P=0.010$), or the composite outcome of any myocardial infarction, coronary revascularization, and unstable angina (HR 0.87, $P=0.006$). However, the rate of fatal myocardial infarction was numerically, but not significantly, increased with intensive versus standard therapy (HR 1.68, $P=0.121$).

The investigators point out that the possible beneficial effects of intensive glycaemic control are at odds with the primary, prespecified outcomes of

the ACCORD trial, which showed an increased risk of cardiovascular and all-cause death with strict glucose lowering.

In an associated editorial in the *Lancet*, Jean-Louis Chaisson and Jacques Le Lorier find the latest analysis reassuring, because “intensive therapy was associated with [a] significant reduction in the 5-year incidence of ischaemic heart disease (13%)”. However, they point out that the possible benefits “do not totally negate the potential harmful effect of intensive glycaemic treatment on cardiovascular mortality in selected patients under specific conditions”.

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Original article Gerstein, H. C. *et al.* Effects of intensive glycaemic control on ischaemic heart disease: analysis of data from the randomised, controlled ACCORD trial. *Lancet* doi:10.1016/S0140-6736(14)60611-5