Intensive insulin provides survival

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Long-term follow-up of the DIGAMI 1 trial – a landmark study of type 2 diabetes in Sweden – shows that intensive insulin treatment prolonged life by more than 2 years in patients with diabetes after a heart attack, compared with standard treatment for diabetes, reports Dr Viveca Ritsinger from the Unit of Cardiology of the Department of Medicine, Karolinska Institute, Stockholm, Sweden and colleagues in *The Lancet Diabetes & Endocrinology*.

The trial, involving 620 patients with type 2 diabetes, began in 1990. Patients who were admitted to hospital with a suspected heart attack received either intensive insulin treatment (an insulin-glucose infusion for at least 24 h, followed by insulin injection four times a day for at least 3 months) or standard glucose-lowering treatment (involving insulin only rarely) for one year. The purpose of the study was to determine whether the difference in treatment affected all-cause mortality in the long-term.

In the new study, patients were followed for up to 20 years, during which time most of them died. Those who received intensified insulin treatment during the trial survived an average (median) of 2-3 years longer compared with those who received standard treatment. The effect was apparent for at least 8 years after randomisation and thereafter leveled off. Patients who were at low cardiovascular risk (less than 70 years old, no history of heart attack or congestive heart failure) and had not previously had insulin therapy when the trial started seemed to benefit the most from intensive insulin treatment. A

lthough the results clearly show a benefit of intensive insulin treatment after a heart attack in patients with type 2 diabetes, the effect on survival seen is probably larger than would be seen if the trial was started today. Compared with 1990, when DIGAMI 1 began, there have been many advances in conventional treatment of patients with type 2 diabetes and cardiovascular complications, such as more frequent use of medication to lower cholesterol (statins) and blood pressure (angiotensin-converting-enzyme inhibitors).

According to Denise Bonds, of the National Institutes of Health, Bethesda, MD, USA, in an accompanying Comment, the new study "points to the benefit of good glucose control even when other risk factors such as lipids or blood pressure cannot be or are not modified…it provides an important reminder of how quickly medicine is advancing, something that is often forgotten in the busy day-to-day practice of medicine. In 20 years, we have gone from few glucose-lowering therapies to over half a dozen oral therapy drugs, plus insulin, plus effective treatments to reduce the risk of elevated lipids and blood pressure. Now, the challenge is choosing the best treatment option for our patients."

More information: Paper: http://www.thelancet.com/journals/landia/article/PIIS2213-8587(14)70088-9/abstract

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