A new era in the secondary prevention of CVD in prediabetes - the Acarbose Cardiovascular Evaluation (ACE) trial

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Cardiovascular disease (CVD) and diabetes are linked inextricably. Type 2 diabetes confers a 2–4 times greater risk of heart disease and stroke than is seen in the general population, with a concomitant reduction in life expectancy of 5–10 years. Data from the Euro Heart Survey and the China Heart Survey have shown that many patients with CVD also have prediabetes, defined as impaired fasting glucose (IFG) and/or impaired glucose tolerance (IGT). This has led to recent European guidelines recommending that all patients with known CVD undergo an oral glucose tolerance test (OGTT), to better establish their risk profile. In addition, there is growing evidence that people with prediabetes are at increased CVD risk, as well as at increased risk of developing type 2 diabetes.

Observational data suggest that the increased CVD risk seen in prediabetic and diabetic individuals, may be driven in part, by postprandial metabolic abnormalities. The STOP-NIDDM trial reported that reduction of postprandial hyperglycaemia with acarbose was associated with a significant reduction in cardiovascular (CV) events, even though the study was not powered for this outcome. The NAVIGATOR trial is evaluating the impact of a prandial glucose regulator on CVD risk in patients with CVD and IGT. The Acarbose Cardiovascular Evaluation (ACE) trial is a new CV outcome study examining the ability of acarbose to reduce the risk of recurrent CV events in Chinese patients with CVD and IGT. This randomised, placebo-controlled, CV outcome trial will recruit approximately 6,500 individuals, with results expected in 2012.