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HIGH BLOOD SUGAR MAJOR RISK FACTOR FOR DEATH AFTER HEART ATTACK

Studies Reveal Links Between Diabetes Management and Cardiovascular Risks

ATLANTA, GA (March 14, 2006) — High fasting blood glucose increases one's long-term risk of death following a heart attack, further solidifying the critical association of diabetes and cardiovascular problems, according to research presented today at the American College of Cardiology's 55th Annual Scientific Session. Interestingly, one study found the use of insulin in diabetics with heart failure reduces the risk of atrial fibrillation and flutter, also known as "heart flutter." ACC 06 is the premier cardiovascular medical meeting, bringing together more than 30,000 cardiologists to further breakthroughs in cardiovascular medicine.

High Fasting Glucose Is a Risk Factor for Mortality in Heart Attack Patients (Abstract 830-5)

While many studies have examined glucose levels of heart attack victims and its relationship to long-term prognosis, the association of prognosis and fasting glucose levels post-heart attack has not been properly explored. Study authors from Rambam Health Campus in Israel, examined the long-term death rate of heart attack patients with a range of fasting blood glucose levels to find if any such correlation exists.

Researchers examined the death rates of 785 patients with various fasting glucose levels (high, >126 mg/dL; impaired, 110-125 mg/dL; and normal, <110 mg/dL), measured after more than eight hours of fasting but within 24 hours after the heart attack. Among patients with high blood glucose, the post-heart attack death rate over a 23-month period was 36.6 percent, compared to 17 percent for patients with impaired fasting blood glucose and just 6.2 percent for patients with

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normal blood glucose. The findings suggest hyperglycemia—high blood sugar—in heart attack victims is a strong independent risk factor for mortality.

"We're hopeful that our research may empower health care providers to more accurately determine a heart attack victim's risk of serious complications or even death," said Mahmoud Suleiman, M.D., Rambam Health Campus, and lead author of the study. "More research is needed to confirm our findings, but we believe measuring for fasting blood glucose is an important prognostic procedure and encourage health care providers to take note of this apparent association."

Insulin Use May Reduce Risk of Heart Flutter in Patients with Heart Failure (Abstract 804-7)

Though insulin is believed to have an influence on the electrical activity of the heart, it remains unclear whether there is a link between insulin use and the incidence of atrial fibrillation, or "heart flutter," which is common in patients with heart failure. Heart flutter is a condition that involves rapid, uncoordinated contractions of the heart. Researchers from Kaiser Permanente in Los Angeles reviewed and evaluated the rates of heart flutter among a large group of heart failure patients, including non-diabetics, diabetic insulin users, and diabetic non-insulin users.

Researchers examined the records of more than 28,000 patients with heart failure, based on care management databases over a six-year period. Nearly half (45%) of the patients had diabetes, 38 percent of whom regularly used insulin. After adjusting for age, gender, education, income and other factors, researchers found that diabetics with heart failure who used insulin had a 19 percent lower risk of heart flutter, compared to the control group of heart failure patients without diabetes. The occurrence of heart flutter among diabetics who were not treated with insulin was no different from non-diabetics. The results suggest use of insulin in at-risk patients may be beneficial in protecting against atrial fibrillation.

"Our findings represent a step forward in ongoing efforts to understand the relationship between insulin use and atrial fibrillation," said Somjot S. Brar, M.D., of Kaiser Permanente and lead author of the study. "More research must be conducted to better understand the mechanisms of this apparent protective effect and whether some diabetic patients with heart disease may benefit from earlier insulin use instead of oral diabetes medications.

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The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.06 and the ACC inaugural i2 Summit, the first-ever meeting for interventional cardiologists, will bring together more than 30,000 cardiologists and cardiovascular specialists to share the newest discoveries in the treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.