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LOW BLOOD SUGAR: A KILLER FOR KIDNEY DISEASE PATIENTS?

Patients with or without Diabetes Are at Risk for Developing Hypoglycemia

Washington, DC (May 5, 2009) — Low blood sugar, or hypoglycemia, poses a serious health threat for patients with chronic kidney disease (CKD), according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The findings indicate that hypoglycemia may account for some portion of the excess heart-related deaths seen in CKD patients.

Glucose control is the key to preventing end-stage renal disease (ESRD) in CKD patients with diabetes. However, managing diabetes in CKD patients can be complicated, as patients' reduced kidney function can affect how they react to anti-diabetes medications. Difficulties with managing their diabetes can predispose CKD patients to episodes of hypoglycemia, a condition that can cause severe health complications including dizziness, disorientation, slurred speech, convulsions, and death.

Jeffrey C. Fink, MD (University of Maryland Medical System), Maureen F. Moen (University of Maryland School of Medicine), and their colleagues designed a study funded by the NIDDK and an ASN Student Scholar grant to examine the incidence of hypoglycemia among CKD patients and to determine whether the condition might contribute to CKD patients' deaths. The researchers assessed the incidence of hypoglycemia in CKD patients relative to non-CKD patients, both with and without diabetes, and they examined the association of hypoglycemia with subsequent near term deaths (one day after blood glucose measurement).

Analysis included information from 243,222 individuals cared for at the Veterans Health Administration. The incidence of hypoglycemia was higher in patients with CKD versus without, both among patients with diabetes and among those without. The risk of hypoglycemia was highest in individuals with both CKD and diabetes.

Hypoglycemia increased patients' risk of dying in the near term. According to the authors, there was a reduced risk of near term death in individuals with CKD relative to those without and this attenuation

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in the risk of death might relate to an increased quality of care in these patients with CKD relative to diabetic patients without CKD.

“The association of hypoglycemia with one-day mortality underscores the significance of this metabolic disturbance in patients with diabetes and chronic kidney disease,” said Dr. Fink. While details on therapy were not included in this study, the findings are consistent with others that have shown that putting patients on intensive glucose-lowering medications can lead to an increased incidence of hypoglycemia and does not prolong their survival.

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The article, entitled “The Frequency of Hypoglycemia and Its Significance in Chronic Kidney Disease,” will appear online at <http://cjasn.asnjournals.org/> on May 7, 2009, doi 10.2215/CJN.00800209.

Founded in 1966, the American Society of Nephrology (ASN) is the world’s largest professional society devoted to the study of kidney disease. Comprised of 11,000 physicians and scientists, ASN continues to promote expert patient care, advance medical research, and educate the renal community. ASN also informs policymakers about issues of importance to kidney doctors and their patients. ASN funds research, and through its world-renowned meetings and first-class publications, disseminates information and educational tools that empower physicians.

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