High blood glucose levels may increase kidney disease in elderly populations

March 6 2012

defined as having multiple risk factors associated with developing diabetes and heart disease—had an increased risk of chronic kidney disease, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (*JCEM*).

An individual is diagnosed with the metabolic syndrome when they have three or more of the following risk factors for diabetes and heart disease: high abdominal obesity, low HDL ("good") cholesterol, high blood pressure, high triglycerides (fat in the blood) and high blood glucose levels. The metabolic syndrome is more common in older populations and while previous studies have demonstrated an association between the metabolic syndrome and kidney disease, the current study is the first to investigate this association as it applies to the elderly population.

"Our study found that metabolic syndrome predicts both the prevalence and incidence of chronic kidney disease in people aged 65 years or older," said lead investigator Chung-Jen Yen, MD, of National Taiwan University in Taipei, Taiwan. "We also found that rapid decline in renal function is more likely found in individuals with insulin resistance and high blood sugar levels."

In this study, researchers sought to define the effect of the metabolic syndrome and insulin resistance on the development of chronic kidney disease, and the decline in renal function in a cohort of 1,456 Asians aged 65 years or older. Yen and his colleagues evaluated study

participants for the metabolic syndrome and insulin resistance, and followed them for an average of more than three years. They found that insulin resistance may be the central hub that links metabolic syndrome and the deterioration of renal function.

"Our study suggests that people can safeguard their kidneys when they take care of their blood glucose levels and lose weight," said Yen. "Further studies are needed to assess the impact of treating metabolic syndrome and insulin resistance on renal outcomes in the elderly population."

More information: The article, "Metabolic syndrome and insulin resistance as risk factors for development of chronic kidney disease and rapid decline in renal function in the elderly" appears in the April 2012 issue of *JCEM*.

Provided by The Endocrine Society