

Microalbuminuria May Predict Renal, Cardiovascular Disease in Hypertensive Patients

Microalbuminuria may predict renal and cardiovascular disease in patients with hypertension but without diabetes, according to the results of a study reported online April 29 in the *Clinical Journal of the American Society of Nephrology*. The findings emphasize the usefulness of a more widespread evaluation of microalbuminuria in an effort to guide the management of hypertension.

Increased urinary albumin excretion is a known risk factor for cardiovascular events and clinical nephropathy in patients with diabetes. Whether microalbuminuria predicts long-term development of chronic renal insufficiency (CRI) in patients without diabetes and with primary hypertension remains to be documented.

The investigators performed an 11.8-year follow-up of 917 patients with hypertension but without diabetes (total follow-up, 10,268 person-years) who were enrolled in the Microalbuminuria: A Genoa Investigation on Complications (MAGIC) cohort between 1993 and 1997. At baseline, untreated patients underwent testing of urinary albumin-to-creatinine ratio (ACR) for determination of microalbuminuria, defined as an ACR of at least 22 mg/g in men and an ACR of at least 31 mg/g in women.

Microalbuminuria at baseline was associated with an increased risk during follow-up for the development of CRI (relative risk [RR], 7.61; 95% confidence interval [CI], 3.19 - 8.16; $P < .0001$), cardiovascular events (defined as a composite of fatal and nonfatal cardiac and cerebrovascular events; RR, 2.11; 95% CI, 1.08 - 4.13; $P < .028$), and cardiorenal events (defined as a composite of these other endpoints; RR, 3.21; 95% CI, 1.86 - 5.53; $P < .0001$). After adjustment for several baseline covariates, including age, body mass index, blood pressure, cholesterol level, and renal function, microalbuminuria continued to be significantly associated with CRI (RR, 12.75; 95% CI, 3.62 - 44.92; $P < .0001$) and cardiorenal events (RR, 2.58; 95% CI, 1.32 - 5.05; $P < .0056$).

References:

Clin J Am Soc Nephrol. Published online April 29, 2010. [Abstract](#)