

# Early Nephropathy Common in Mexican Type 2 Patients

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**T**wo-thirds of Mexican patients with type 2 diabetes attending primary health care medical units had nephropathy, according to a recent study.

Alfonso M. Cueto-Manzano, MD, and colleagues reported in *Kidney International* results of a study that looked at the prevalence and risk factors for early nephropathy in this population. Dr. Cueto-Manzano, from the Hospital de Especialidades in Mexico, and collaborators randomly selected 765 patients from three primary care medical units.

The investigators obtained an albuminuria dipstick and blood sample and performed a detailed clinical examination. Dr. Cueto-Manzano wrote that if the albuminuria dipstick was positive, a 24-hour urine collection was taken within the next 2 weeks to quantify albuminuria. Glucose, creatinine and lipids were determined from the blood sample. "Glomerular filtration rate was calculated using the Modification of Diet in Renal Disease Study equation," he wrote. Clinical examination and medical charts were used to record demographics and medical history.

Forty percent of patients evaluated had early nephropathy, 31% had normal function and 29% had overt nephropathy. Patients with more severe kidney damage were older and were more likely to be illiterate than those with less severe kidney damage, the investigators found.

Patients with more severe nephropathy were likely to have longer diabetes duration, have hypertension and have higher systolic blood pressure. Both groups of patients with nephropathy had a significantly higher proportion of a family history of nephropathy and a

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higher frequency of cardiovascular disease (CVD).

Only patients with overt nephropathy had peripheral neuropathy and retinopathy more frequently. Dr. Cueto-Manzano wrote that fasting glucose was poorly controlled in all groups. A high body mass index, smoking and alcoholism were frequently found in patients with nephropathy, although there were no significant differences. In a multivariate analysis, age, duration of diabetes, presence of retinopathy, hypertension, and CVD were significantly associated with nephropathy.

The authors concluded that two-thirds of Mexican patients with type 2 diabetes in this investigation had nephropathy, 40% of whom were at an early stage of the disease. "Many modifiable and nonmodifiable risk factors were present in these patients, but the most significant predictors for nephropathy are older age, longer duration of diabetes, the presence of retinopathy, hypertension and [CVD]," they wrote. ■

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Cueto-Manzano AM, Cortes-Sanabria L, Martinez-Ramirez HR, et al. Detection of early nephropathy in Mexican patients with type 2 diabetes mellitus. *Kidney Int.* 2005;68:S40-S45.