

Database Review of Routine Lab Test Could Identify Kidney Trouble

The use of effective therapies can be maximized to prevent premature kidney disease, CVD and mortality.

REVIEWED BY AMIT X. GARG, MD

Routine laboratory tests performed for other reasons may provide a new approach to identifying patients – particularly older adults – with reduced kidney function.

A study led by Amit X. Garg, MD, of the University of Western Ontario, appearing in the *Journal of the American Society of Nephrology*, looked at the results of kidney function tests in adult patients from 17 outpatient laboratories. The focus of the study was on identifying unsuspected abnormalities; therefore patients with end stage renal disease were excluded.

The final analysis included tests from approximately 350,000 patients, or one-third of the Eastern Ontario population. One in six (16%) of adults in the population had a reduced glomerular filtration rate (GFR) of <60 mL/min per 1.73 m².

TRUE REDUCTION IN FUNCTION

More than two-thirds of patients who underwent repeated tests in the same month had similar results on both occasions. “Low GFR were usually not transient: 68% of individuals with subsequent testing at least 30 days later had a similar or worse GFR,” Dr. Garg wrote. This suggested that abnormal GFR results signaled true reductions in kidney function rather than temporary drops due to disease or other causes.

Dr. Garg and colleagues said that early identification of chronic kidney disease (CKD) is a health care concern because effective treatments can slow or prevent progressive kidney disease. CKD is recognized as a major risk factor for the development of cardiovascular diseases (CVD) such as myocardial infarction and stroke, and early

Abnormal GFR was an indication of reduced kidney function in this population of 350,000 patients.

treatment of CKD has been shown to reduce the risk of later development of CVD. Many cases of CKD go undetected by routine medical care, the researchers wrote.

Based on results of their study, Dr. Garg and colleagues proposed that laboratory-initiated screening could provide an innovative approach to identifying patients with CKD. Because kidney function tests are routinely performed for other reasons, especially in older adults, laboratory-based screening could use existing data to identify patients at risk of both kidney and heart disease. In turn, the use of effective therapies could be maximized.

More research would be needed to address potential difficulties of setting up such a real-time data management system, including questions related to patient privacy and laboratory quality control. Dr. Garg and colleagues concluded: “Ambulatory laboratory database screening, particularly in older patients, is a promising strategy for case finding large segments of the population with reduced GFR. ■

Amit X. Garg, MD, is from the University of Western Ontario, London, Ontario. He can be reached at 519-685-8502 or amit.garg@lhsc.on.ca.

Garg AX, Mamdani M, Juurlink DN, van Walraven C. Identifying individuals with a reduced GFR using ambulatory laboratory database surveillance. *J Am Soc Nephrol.* 2005;16:in press.