Do We Need to Test for CHD before Kidney Transplant?

Preoperative testing for coronary heart disease (CHD) does not reduce the risk of myocardial infarction (MI) or death in the early weeks after kidney transplantation, reports a study in *JAMA Internal Medicine*.

Using the US Renal Data System, the researchers identified 79,334 adults undergoing first-time kidney transplantation from 2000 through 2014. All were enrolled in Medicare for at least 1 year before and 1 year after transplant. The mean age was 56 years; 62% of patients were men, and 61% were White.

The researchers performed an instrumental variable (IV) analysis, with program-level rates of preoperative CHD testing in the year of transplantation as the IV. Non-urgent CHD testing, invasive or non-invasive, was analyzed for an association with a primary composite outcome of death or MI during the first 30 days after transplantation.

A primary composite outcome event occurred in 5.3% of patients: acute MI in 2.9% of patients and death in 2.6%. From 2012 to 2014, program-level rates of preoperative CHD testing ranged from 56% in the top quintile to 24% in the bottom quintile.

In the main IV analysis, the CHD testing rate was unrelated to the 30-day risk of MI or death: the rate difference of 1.9% was not statistically significant. The findings were consistent across most study periods. The exception was from 2000 to 2003 when CHD testing was associated with higher risk of primary outcome events: rate difference, 6.8%.

Screening for CHD before kidney transplantation is widely recommended and performed—despite a lack of evidence that it affects transplant outcomes. One study has suggested that patients selected for screening are a group at higher risk of MI. Until the results of an ongoing randomized trial are available, IV analysis provides a means of drawing causal inferences from observational data.

Testing for CHD before kidney transplant does not reduce the risk of adverse outcomes during the early posttransplant period, the quasi-experimental study concludes. The results, added to ongoing interventional studies, "may pave the way to deescalating CHD testing before kidney transplantation," the researchers conclude [Cheng XS, et al. Association of pretransplant coronary heart disease testing with early kidney transplant outcomes. *JAMA Intern Med* 2023; 183:134–141. doi: 10.1001/jamainternmed.2022.6069]. ■

Traditional Risk Factors Explain Higher CKD Risk in Black Americans

The higher incidence of chronic kidney disease (CKD) among Black compared with White US adults is largely explained by traditional CKD risk factors, concludes a study in the *American Journal of Kidney Diseases*.

The analysis included 4198 Black and 7799 White participants from the "Reasons for Geographic and Racial Differences in Stroke" (REGARDS) study. All were at least 45 years old at enrollment in 2003–2007, with a baseline estimated glomerular filtration rate (eGFR) greater than 60 mL/min/1.73 m^2. CKD incidence and risk factors were compared between Black and White participants. The study definition of CKD was eGFR of less than 60 mL/min/1.73 m^2 with a decline of at least 40% from baseline or kidney failure. At 9.4 years' follow-up, CKD incidence was 9%, ranging from 4% for adults aged 45 to 54 years to 18% in those aged 75 or older. Black race was associated with higher risk of eGFR change during follow-up, after adjustment for age, sex, and race.

However, the racial association was no longer significant in a fully adjusted model accounting for all risk factors. Independent risk factors for CKD included age, low income, residence in the Southeastern "Stroke Belt" states, systolic blood pressure, body mass index, diabetes, hyperlipidemia, and albuminuria.

Risk factors were similar on analysis of CKD incidence. For both eGFR change and CKD, albuminuria was a stronger risk factor in Black compared with White adults and for participants living in the Stroke Belt.

There are known racial disparities in the prevalence and associated costs of CKD in the US population. There are few data on the incidence of and risk factors for CKD in a contemporary US population, including possible differences by race, sex, or region.

Modifiable risk factors, such as diabetes, hypertension, and obesity, account for most of the increased incidence of CKD among Black Americans, the new results suggest. Further study is needed to clarify the importance of albuminuria and Stroke Belt residence as risk factors for incident CKD and eGFR decline [Cheung KL, et al. Risk factors for incident CKD in Black and White Americans: The REGARDS study. *Am J Kidney Dis*, published online ahead of print January 5, 2023. doi: 10.1053/j.ajkd.2022.11.015; https://www.ajkd.org/article/S0272-6386(23)00005-7/fulltext]. ■