

Higher urinary albumin excretion linked with increased risk of CHD among black adults

August 20 2013

In a large national study, higher levels of the urinary albumin-to-creatinine ratio was associated with greater risk of incident but not recurrent coronary heart disease in black individuals when compared with white individuals, according to a study in the August 21 issue of *JAMA*.

"Increased urinary albumin excretion is an important marker of kidney injury and a strong risk factor for [cardiovascular disease](#). Black individuals have higher levels of urinary albumin excretion than white individuals, which may contribute to [racial disparities](#) in [cardiovascular outcomes](#)," according to background information in the study. Previous research indicated that the association of urinary albumin-to-creatinine ratio (ACR) with incident stroke differed by race, such that higher urinary ACR was independently associated with a greater risk of incident stroke in black individuals but not in white individuals. Whether similar associations extend to [coronary heart disease](#) (CHD) is unclear.

Orlando M. Gutierrez, M.D., M.M.Sc., of the University of Alabama at Birmingham, and colleagues conducted a study to determine whether the association of [urinary albumin excretion](#) with CHD events differs by race. The study included black and white U.S. adults, 45 years and older, who were enrolled within the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study between 2003 and 2007 with follow-up through December 2009. The researchers examined race-stratified associations of urinary ACR in 2 groups: (1) incident CHD among 23,273 participants free of CHD at baseline; and (2) first

recurrent CHD event among 4,934 participants with CHD at baseline.

Over a median (midpoint) 4.5 years of follow-up, a total of 616 incident CHD events (259 among black participants and 357 among white participants) were observed. Of these, 421 were nonfatal heart attacks and 195 were CHD-related deaths. Analysis of the data indicated that age- and sex-adjusted [incidence rates](#) increased in the higher categories of urinary ACR in both black and white participants. The adjusted incidence rates in the 2 highest categories of ACR were approximately 1.5-fold greater in black participants when compared with white participants.

"In models adjusted for traditional cardiovascular [risk factors](#) and medications, higher baseline urinary ACR was associated with greater risk of incident CHD among black participants but not white participants," the authors write. "Among those with CHD at baseline, fully adjusted associations of baseline urinary ACR with first recurrent CHD event were similar between black participants vs. white participants."

"These findings confirm the results of prior studies showing that urinary ACR is an important biomarker for CHD risk in the general population, even among individuals with ACR values that are less than the current threshold for defining microalbuminuria. Additionally, to our knowledge, this is the first study to demonstrate that the higher risk of incident CHD associated with excess ACR differs by race."

"Future studies should examine whether addition of ACR can improve the diagnosis and management of CHD in black individuals," the researchers conclude.

Daniel E. Weiner, M.D., M.S., of Tufts Medical Center, Boston, and Wolfgang C. Winkelmayer, M.D., Sc.D., of the Stanford University

School of Medicine, Palo Alto, Calif., (and Associate Editor, JAMA), write in an accompanying editorial the "the study by Gutierrez and colleagues reinforces that even mild elevations in urine ACR are associated with increased CVD risk, even though this level of albuminuria will have no meaningful systemic effects."

"Differentiating between low normal and high normal urinary ACR may further aid in cardiovascular risk stratification, particularly in black individuals, and motivate prevention and heightened monitoring of these individuals."

More information: *JAMA*. 2013;310(7):706-713
JAMA. 2013;310(7):697-698

Provided by The JAMA Network Journals

Citation: Higher urinary albumin excretion linked with increased risk of CHD among black adults (2013, August 20) retrieved 23 April 2024 from <https://medicalxpress.com/news/2013-08-higher-urinary-albumin-excretion-linked.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--