MedicalXpress

African-Americans face twice the rate of sudden cardiac arrest, compared to Caucasians

July 20 2015

Compared to Caucasians, African-Americans face twice the rate of sudden cardiac arrest, according to a new study from the Cedars-Sinai Heart Institute.

The study's findings, published in the peer-reviewed journal *Circulation*, result from the first scientific analysis comparing the detailed medical history of patients of different races who were stricken by the usually fatal condition. Approximately 350,000 die every year from sudden cardiac arrest in the U.S.

"We do not know why African-Americans are more likely to have sudden cardiac arrest," said Kyndaron Reinier, PhD, lead author of the paper and research scientist in the Arrhythmia Research Laboratory at the Cedars-Sinai Heart Institute. "It could be due to the higher burden of illnesses that increase risk of heart disease, like hypertension and diabetes. Or it could be genetic because we know that certain health conditions are more prevalent in particular groups of people. Or, the reason could be environmental, such as access to good healthcare. But there is no doubt that there are differences between the races when it comes to clinical outcomes."

The study came out of the Oregon Sudden Unexpected Death Study, a comprehensive, 16-hospital, multiyear assessment of cardiac deaths in the 1 million population Portland, Oregon, metropolitan area. Led by

Sumeet Chugh, MD, the project - now ongoing for more than a decade—provides Chugh and his team with unique, community-based information to help determine the causes of sudden cardiac arrest.

"Because sudden cardiac arrest is usually fatal, we have to prevent it before it strikes," said Chugh, senior author and associate director of the Cedars-Sinai Heart Institute and the Pauline and Harold Price Professor of Cardiac Electrophysiology. "These findings suggest the possibility that when it comes to prevention of sudden cardiac death, different races and ethnicities may not necessarily be painted with one broad brush."

In this study, interviewers reviewed medical records of 126 African-Americans and 1,262 Caucasians with sudden cardiac arrest in the Portland area between Feb. 1, 2002 and Jan. 31, 2012. Among the study's findings:

- African-Americans were an average of six years younger when they experienced sudden cardiac arrest.
- The incidence of sudden cardiac arrest among African-American men was 175 per 100,000 people, compared to 84 per 100,000 for Caucasian men.
- For African-American women, the incidence was 90 per 100,000, compared to 40 per 100,000 for Caucasian women.
- 52 percent of African-American patients had diabetes, compared to 33 percent of Caucasian patients.
- Hypertension, chronic kidney insufficiency and congestive heart failure also were significantly more prevalent among African-Americans.

Although "sudden cardiac arrest" and "heart attack" often are used interchangeably, the terms are not synonymous. Unlike heart attacks (myocardial infarctions), which are typically caused by clogged coronary arteries reducing blood flow to the heart muscle, sudden cardiac arrest is

the result of defective electrical activity of the heart. Patients may have little or no warning, and the disorder usually causes instantaneous death.

Sudden cardiac arrest has been blamed for the deaths of journalist Tim Russert and filmmaker John Hughes as well as U.S. Olympic volleyball player Flo Hyman and professional basketball players Pete Maravich and Reggie Lewis.

As of this year, Chugh has expanded this study to Southern California with the goal of analyzing sudden cardiac arrests in more ethnically and racially diverse communities.

Provided by Cedars-Sinai Medical Center