

Racial disparity remains in heart-transplant mortality rates

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Vincent Liu is lead author of a study reporting that African Americans continue to fare worse after heart transplants than white patients do. Credit: Steve Fisch

(Medical Xpress) -- African-American heart transplant patients have had persistently higher mortality rates than white patients, but exactly why still remains a mystery.

In a School of Medicine study published in *Circulation* on April 19, researchers reported that while improvements in [mortality rates](#) in heart transplant patients have been made by all [racial groups](#) over the past decade, an unexplained gap still exists between white and African-American patients.

“It’s easier to document these disparities than it is to find an explanation for why this gap exists,” said the study’s senior author Mark Hlatky, MD, professor of cardiovascular medicine and of health research and policy.

“We need a better understanding of the reasons for this gap and, in particular, the possible roles of biologic factors and socioeconomic factors.”

Racial and ethnic disparities are well-documented in many areas of health care, but haven’t been examined closely among heart transplant patients, said Vincent Liu, MD, a postdoctoral scholar in pulmonary and critical care medicine and first author of the study. The study examined data from the United Network of Organ Sharing based on the 39,075 patients who underwent a heart transplant in the United States from 1987 to 2007. Among the non-white group, 8,082 of the total patients nationwide, only the cohort of African-American patients had a greater risk of death than the group of 30,003 white heart transplant recipients.

In the period from 1987-99, the adjusted five-year mortality rate was 27.4 percent for white recipients and 38.2 percent for black recipients. In the most recent period, from 2002-05, the rates were 24 percent for whites and 33.7 percent for blacks.

Researchers also found a difference in the cause of death between black patients and all others. Black patients were more likely to die from graft failure or a cardiovascular event than were white patients, but less likely to die from infection or malignancy. Infection or malignancy was the most common cause of death for all other patients.

“I was surprised by this persistent gap,” said Liu. “I thought it would begin to close over time; instead it remained relatively constant.”

The continued racial gap was particularly surprising in light of the results of another recent Stanford study Liu authored that showed a similar racial disparity gap had disappeared during the latter time period among African-American lung transplant patients compared to their white counterparts.

The lung transplant study, which was published in the Archives of Surgery in March, found that black patients were at an increased risk of death compared with white patients during the earlier period, 1987-2000, but that this gap disappeared from 2001-07.

It's uncertain why this discrepancy would still exist for heart transplant patients while disappearing for lung transplant patients, but the authors speculated that African-American heart transplant patients may not be receiving sufficient amounts of immunosuppressant drugs following transplantation.

Blacks were more likely to die of causes potentially associated with under-immunosuppression — graft failure and cardiovascular causes — whereas whites and other non-blacks were more likely to die from causes associated with over-immunosuppression — infection and malignancy.

“It looks like one of the keys is that immunosuppressant medication may be less effective for black patients,” said Hlatky. “Or, perhaps, there are just barriers for them getting the drugs at the time they need them. We really need to dissect that out.”

The authors recommend that future research explore the biological effects of immunosuppressant drugs on different racial subgroups, including African-Americans, in clinical trials. Current clinical treatment of African-American heart transplant patients should perhaps also include closer monitoring of their drug treatment therapy to see if it is working.

“We also need to explore economic issues such as barriers to health care and medical insurance for African-American heart transplant patients,” Hlatky said.

Provided by Stanford University Medical Center

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