

# Hidden heart condition increases the risk of death in patients waiting for kidney transplants

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An often asymptomatic condition—systolic dysfunction, or decreased pumping of the heart—poses an increased risk of death for patients on kidney transplant waiting lists, according to a study appearing in the June 2008 issue of the Journal of the American Society Nephrology (JASN). The findings reveal that a clinical indicator beyond well-known risk factors for cardiovascular mortality should be considered when caring for patients waiting for kidney donations. The study also suggests that changes in organ allocation policies may be warranted.

Previous research has shown that patients with chronic kidney disease face an elevated risk of dying from heart conditions, such as cardiac ischemia, which occurs when the heart receives an insufficient supply of blood and oxygen. However, ischemic events do not account for most of the cardiac deaths that have been reported in these patients.

To determine what other heart effects may be playing a role in the deaths of patients with chronic kidney disease, Dr. Angelo M. de Mattos, an associate professor of nephrology at the University of California, Davis, School of Medicine and Medical Center in Sacramento, Calif., and colleagues at the University of Alabama at Birmingham analyzed the records for 2,718 kidney transplant candidates, noting the causes of death in those who died. During the study, 681 patients died during follow-up, which was conducted for a median of 27 months.

The investigators discovered that patients with systolic dysfunction were nearly twice as likely to die as those without this condition. This higher rate of mortality was similar to that seen in patients with cardiac ischemia, the most well-known risk factor for cardiovascular death in patients with chronic kidney disease.

Dr. de Mattos and his team found that death rates for patients with systolic dysfunction who were waiting for kidney transplants were almost six-fold higher than the reported mortality for individuals with systolic dysfunction in the general population.

The study “identifies a subset of the chronic kidney disease population (those with systolic dysfunction, with or without ischemia) at significantly higher mortality risk while awaiting transplantation, where the role of medical interventions and devices such as implantable cardiac defibrillators and pacemakers should be studied,” the authors write. Widely available and minimally invasive testing could be used to help identify those patients with chronic kidney disease who have this mostly asymptomatic, yet life-threatening, condition.

The authors note that if their findings are supported by additional studies, organ distribution policies may need to be redesigned so as to place a priority on these individuals who traditionally have not been considered at an increased risk of death.

The study entitled, “Systolic Dysfunction Portends Increased Mortality among Those Waiting for Renal Transplant,” is available online at [jasn.asnjournals.org/](http://jasn.asnjournals.org/) and will appear in print in the June issue of JASN.

Source: American Society of Nephrology

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