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KIDNEY TRANSPLANTATION FOUND SUPERIOR TO INTENSIVE HOME HEMODIALYSIS

Transplantation linked with better treatment success and longer survival, but more early hospitalizations

Highlights

- Kidney transplant patients had a reduced risk of treatment failure or premature death compared with patients on long and frequent home hemodialysis.
- Kidney transplant patients had a higher risk of being hospitalized within the first several months to a year, but they had a reduced risk over the long term.

Kidney failure is on the rise and currently afflicts 2 million people worldwide.

Washington, DC (May 22, 2014) — Compared with long and frequent home hemodialysis, kidney transplantation may allow kidney failure patients to be successfully treated and to live longer, but it may also increase their risk of being hospitalized within the first year. Those are the findings of study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN). The results support the need to encourage transplantation for potential candidates who are receiving home hemodialysis, but they also indicate that long and frequent home hemodialysis provides good outcomes for patients.

Many studies have shown that kidney failure patients can receive many benefits from home hemodialysis that is done more often and for a longer stretch of time than is typically done in dialysis centers. While research indicates that conventional in-center hemodialysis is not as beneficial as kidney transplantation, it's unclear how intensive home hemodialysis compares with transplantation.

Karthik Tennankore, MD, FRCPC (Dalhousie University), Christopher Chan, MD, FRCPC (University of Toronto) and their colleagues conducted a study to compare long and frequent home hemodialysis (at least 16 hours/week) with kidney transplantation. Their study included 173 home hemodialysis patients and 1,517 transplant recipients (673 living donor, 642 standard criteria donor, and 202 expanded criteria donor recipients) who received care between 2000 and 2011 in a Canadian medical center.

Among the major findings:

- Kidney transplant patients had a 55% to 61% (depending on organ donor type) reduced risk of treatment failure or death during the study compared with patients on long and frequent home hemodialysis.
- The risk of being admitted to the hospital and spending a longer time in the hospital
 was higher for some kidney transplant patients up to a year after transplantation,
 but lower in the long term compared with dialysis patients.

"This study tells us that we should continue to promote kidney transplantation to eligible patients receiving longer, more frequent home hemodialysis even if they are doing well on their dialysis treatment," said Dr. Tennankore. "This study also tells us that patients who are receiving this type of dialysis still have very good health outcomes," he added.

In an accompanying editorial, Thomas Golper, MD and Rachel Fissell, MD (Vanderbilt University Medical Center) lauded the investigators for the rigorousness of their study. "The gap in clinical outcomes between all forms of kidney transplantation and the putative best forms of dialysis is large. This gap is made even more evident in the report by Tennankore *et al*," they wrote. They explained that transplantation is the most desirable and preferred form of kidney replacement therapy, but dialysis will continue to be important due to the scarcity of organs and the ineligibility of some patients for transplantation. New technologies will hopefully improve dialysis so that it provides more benefits in the future.

Study co-authors include S. Joseph Kim, MD, PhD, FRCPC and Heather Baer, SD.

Disclosures: The authors reported no financial disclosures.

The article, entitled "Survival and Hospitalization for Intensive Home Hemodialysis Compared with Kidney Transplantation," will appear online at http://jasn.asnjournals.org/on May 22, 2014.

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